30

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SOME HISTORY AND ETIOLOGY OF DIABETES MELLITUS*

E. L. YEAKEL, M.D.

SHAWNEE

Diabetes mellitus is a disease of metabolism characterized (1) by a lessened capacity of the organs fixing, storing and consuming grape sugar, (2) by an excess of sugar in the blood resulting in grape sugar in the urine, and (3) by causal changes in the pancreas.

Of course, not all cases of sugar in the urine are diabetic as John[1] has called attention to the fact that while patients may have a high blood sugar and yet only show sugar in the urine periodically, others may have glucose in the urine but a normal glucose tolerance—the sugar being due to a premeable renal filter. So in this discussion we shall try to limit the field to the characteristic diabetes mellitus.

Diabetes is a disease attacking all races, although more frequent in the Jews and well to do classes and relatively infrequent among the Chinese and Negroes.

Men are more susceptible by a ratio of three to two. Most cases are found in the fifth and sixth decades but the highest mortality is in the young.

The question of heredity is not settled but many believe an instability of the glands of internal secretion is transmissable and often we do find several members of a family with endocrine disorders.

Celsus in the first century described diabetes but it was Aretæus (150 A. D.) who gave us the name from the Greek words meaning, a siphon. He had noticed the thirst, diuresis and emaciation.

Galen was familiar with the sweet taste of diabetic urine and the ancient Hindoo physicians described the urine as being sweet as honey, as did Thomas Willis in 1674.

In 1776 Mathew Dobson of Liverpool, evaporated down two quarts of diabetic urine and obtained a cake of sugar weighing two ounces, two drams, two scruples. He also noticed that the blood serum was sweet and and that the urine fermented and lost its sweet taste.

Rollo, in 1797, advocated the use of a meat diet in treatment, especially avoiding sweet vegetables. He also accepted Doctor Cullens opinion that "the cause of this disease was a fault in the assimilatory powers or in those employed in converting alimentary matters into the proper animal fluids." Fifty-two years later Claud Bernard demonstrated that in animals a puncture of a point in the floor of the fourth ventricle caused a transitory glycosuria and in 1857 Bernard discovered the glycogenic function of the liver.

In 1889 Minkowski and von Mering showed that complete extirpation of the pancreas in various animals caused a permanent diabetes and in 1900 Opie working under Welch pointed out the association between degeneration of the islands of Langerhans of the pancreas and the existence of glycosuria and described the difference between interlobular and interacinar pancreatitis.

Otto Cohnheim, by the results of work published in 1903 and 1904, showed that carbohydrates are probably burnt up by the interaction of the glycolytic bodies formed in the pancreas and muscles.

We shall pass over the years from 1904 to a recent date by saying that more real work on the cause of this disease has been done than in all the centuries preceding and that each investigator has added his mite towards a solution.

The glands of internal secretion have all received a great deal of attention, especially the thyroid, posterior, pituitary and adrenals in their relation to the pancreas. Friedman and Gottesman[2] from their work on dogs come to the conclusion that complete thyroidectomy should be tried in the diabetes of children and severe diabetes of adults, who do not respond to the modern treatment.

Lindblom[3] described the post-mortem findings in a boy of sixteen, in which death occurred in the sixteenth month. His conclusion being that because of reduced function of the pancreas, the pituitary and thyroid were stirred to excessive functioning, which

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caused atrophy. The adrenals also showed signs of excessive functioning. He believes the etiology of diabetes in this case was a severe osteomyelitis three years before.

Dresel[4] and Beumer[5] have both demonstrated the influence of the adrenals, by obtaining a reduction of blood and urine sugar following exposure of the adrenals to the roentgen ray.

Thus we now believe the so-called neurogenous type of diabetes to be due to overstimulation of the adrenals through the sympathetic system. Adrenalin being an accelerator of carbohydrate metabolism and its injection capable of producing glycosuria as is the secretion of the posterior lobe of the pituitary. The work of great numbers of investigators although exhaustive in character, has given us very little that is new or definite regarding the true etiology.

The recent work of Banting, McLeod and associates so ably discussed in a recent article in the Journal of the American Medical Association[6] has demonstrated that the islets of Langerhans are at fault and has given us insulin, but as to the exact cause of these changes in the islets very little has been proven.

We must recognize the fact that in our present knowledge true diabetes is endocrine and that it may arise primarily from disturbance of the metabolic center or governing power that keeps these glands so nicely balanced, (as in the very young) and that secondarily it is the failure of a gland or glands constantly overworked in an attempt to keep pace with the ingestion of too much concentrated carbohydrates or glucose forming foods or worn down in their some time previous fight against infection.

If it be true that during infections the adrenals are stirred to greater activity and that the glycolytic function is thus increased to aid our body in the combat, and that a period of recuperative rest should follow but that the glands may have been overwhelmed and degeneration or atrophy be the final result, then we have the right to expect the same thing to happen to the pancreatic islets.

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PATHOLOGICAL ANATOMY OF THE PANCREAS IN DIABETES MELLITUS*

GEORGE O. HARTMAN, M.D.
ENID

The pathological anatomy of diabetes mellitus is by no means clear. In many cases no gross changes are found in any of the organs which seem capable of producing the complete upset of general metabolism which is present in this disease. The blood contains an increased amount of sugar. The glycogen of the liver is absent, or nearly so. If any remains it is now found in the nuclei of the liver cells and not in the granules of the protoplasm, as normally. All the tissues of the body seem devoid of glycogen except the heart muscle, the leucocytes and the renal epithelium of the proximal convoluted tubules. Claude Bernard was able to produce glycosuria and hyperglycemia by injury to the brain. The disease sometimes seems to be associated with disturbances of the central nervous system, and lesions of the brain and spinal cord have been found in cases dying after prolonged glycosuria. However, these lesions are very variable, and in most diabetic autopsies they are not found.

The importance of the pancreas in this disease was demonstrated by Von Mering and Minkowski by animal experimentation. The extirpation of the pancreas is followed by a sweeping out of all but a trace of the glycogen of the liver, and no more can be stored in the liver, even though an excess of carbohydrate be fed. After the glycogen has disappeared the process of gluconeogenesis sets in— that is, glucose is formed from the protein of the body tissues, and the animal shows all the symptoms of acute starvation, associated with some others that may be due to the toxic action of an excess of sugar and other abnormal products, such as ketone bodies, in the blood. By observing the respiratory quotient when carbohydrates are fed to such animals, it has also been found that the tissues are unable to utilize sugar.

The acinar portion of the pancreas secretes the pancreatic juice which enters the duodenum by way of the duct of Wirsong, and aids intestinal digestion. The islands of Langerhans, however, have no direct connection with the acinar portion nor the ducts, but are isolated groups of cells with a very rich blood supply. In diabetes the lesions of the islands are of much more importance

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than those found elsewhere in the pancreas. Opie described a case of severe diabetes in which the gross appearance of the pancreas was normal, but in which practically all of the islands of Langerhans had undergone hyaline degeneration. If this were a constant finding there would be no difficulty in establishing the relation of the islands to diabetes, but there are many cases in which this universal destruction of the islands is not present. Very often there is a fine scarring of the entire organ similar to cirrhosis of the liver, and at other times no demonstrable lesions are found. Cecil, in studying a large number of diabetic cases, found pancreatic lesions in more than eighty-seven percent, in which the islands of Langerhans were always affected, while in about twelve percent only the islands were uninvolved.

Ligature of the pancreatic ducts causes an atrophy of the acini but does not affect the islands of Langerhans, and no glycosuria results. In one series of experiments half of the pancreas was thus ligated and the animal remained apparently normal. After a year the ligated portion remained as a thin transparent film. The remaining normal portion of the pancreas was removed and the animal showed a transient glycosuria which disappeared in several days. The animal could then assimilate large quantities of carbohydrates without manifesting any diabetic symptoms. After a month this atrophied portion was removed, and the animal was at once plunged into severe diabetes. Microscopic examination demonstrated that the only pancreatic cells left in this film were the islands of Langerhans.

Inflammation of the pancreas has long been considered one of the chief pathological lesions associated with diabetes, and many autopsies support this view. The usual after-results of experimental pancreatitis are various degrees of fibrosis and atrophy resembling the so-called chronic pancreatitis in human cases, although occasional instances are found in which the repair of the acinar portion is practically perfect, while the islands are extensively involved and a fatal diabetes is present. Other lesions found in the islands, and which may also be the effect of a chronic inflammatory process, are hyaline degeneration and arterio-sclerotic changes. On the other hand, cases are described in which no evidence of inflammatory change can be found. Also, pancreatitis has been demonstrated in numerous non-diabetic autopsies, sometimes much more marked than in diabetic cases, and the entire clinical evidence has been indecisive and confused.

In some severe cases of diabetes that go to autopsy there are so many normal appearing islands of Langerhans that a functional derangement must be assumed. This functional disturbance has not been reproduced experimentally in animals, and still presents a problem.

There is one important anatomic change which must be considered as a result and not as a pathological lesion producing the diabetes. This is the hydropic degeneration of the islands of Langerhans, consisting of swelling of the cells of the islands and vacuolation of the cytoplasm with the eventual loss of the cells and islands. This probably accounts for much of the loss of island tissue reported in diabetic autopsies. These changes can be produced experimentally, by feeding carbohydrates in excess of the tolerance, apparently through functional overstrain, and the permanent lowering of assimilation which has long been known to follow such overfeeding is now explained by this actual destruction of the islands. This degeneration is demonstrable in human autopsies following intense active diabetes. A point still to be explained is the different susceptibility of islands to over-stimulation; in some cases the vacuolation of the cells and corresponding decline in tolerance may be marked and rapid, while an equally severe hyperglycemia and glycosuria may be endured by other patients for many years with slight injury.

In many cases of diabetes it is difficult if not impossible to demonstrate any lesion of the pancreas, and thus it may be necessary to assume an extra-pancreatic cause, but most investigators have found changes in the islands in an overwhelming proportion of the cases. Thus, while it is not always possible to demonstrate lesions of the pancreas in cases of diabetes, they are usually found. On the other hand, the whole symptom complex can be produced by extirpation of the organ and not by any other means, although a transient glycosuria may have many other causes.

The two points of outstanding importance in the pathologic anatomy are first, the conclusive proof that diabetes is an internal secretory deficiency of the islands of Langerhans; second, the demonstration that any policy of feeding beyond the tolerance, entails progressive destruction of these vital structures.

DISEASES OF THE LIVER*

CHARLES W. HEITZMAN, M.D.
MUSKOGEE

For one who looks only for the classic signs of liver and gall-bladder disease—pain, colic and jaundice—many cases will entirely escape detection and will be consigned to that unknown land of chronic dyspepsia and nervous indigestion. Long continued gastric indigestion in a patient past forty years is always more or less suggestive of gall-bladder disease, although the more we see of liver diseases the less important is the age factor and the more cases are discovered in younger individuals. The constant indigestion gas eructations with more or less vomiting at irregular intervals and constant epigastric distress are always suspicious. This epigastric distress may never reach the point of pain, but is, as frequently, more a fullness or sense of weight. Gastric analysis is of little help, as either a hyperacidity or a subacidity may be present. A very positive sign is the interference with deep inspiration when pressure is made over the gall-bladder region. With the patient flat on his back, knees flexed, firm pressure is made under the right costal arch and the patient is requested to take a deep breath. In the presence of gall-bladder inflammation even of a minor degree, the breath is stopped with a sharp catch short of full inspiration. If this is present on the right side and absent on the left this sign almost invariably points to gall-bladder or liver inflammation.

The most heralded if not the most frequent type of liver disease that is brought to our notice is that of gall stones and is usually observed in two forms—the expulsive form and the vesicular form. In the former, the stones pass into the duodenum; in the latter the stones cannot pass through the cystic duct, and therefore fall back into the gall-bladder, as a rule but not always, at times becoming fixed or lodged in the cystic duct. The symptoms of the two differ. In expulsive colic the gall-bladder is not distended. Pain is extremely violent, is of short duration and ceases suddenly. There is frequent icterus. Biliary pigments are found in the urine. Stools are clay colored from time to time. Gall stones may be found in the stools. Attacks succeed one another at rather long intervals. Enlargement of the liver and hepatalgia. In the vesicular form the gall-bladder is frequently distended. Pain is less violent but of longer duration and does not cease so abruptly. Icterus is rare and when present is only slight. Stools are not clay colored and no biliary pigments are found in the urine. Stones are never found in the stools. Attacks succeed one another at short intervals and uninterruptedly. Liver is of normal size and not painful to pressure.

Another form of liver disease is one that for want of a better name may be termed migraine or neuralgia of the liver. The diagnosis of this form of neuralgic pain in the stomach and liver is not always easy, as it closely resembles gall-stone colic. However, in cases of supposed gall-stone colic where there are not positive objective symptoms such as swelling, passing of stones, recurring icterus and fever, duodenum pulled to right in Roentgen picture, abdominal migraine must be thought of, and inquiries should be made along that line, especially in the case of women. It frequently happens that such migraine pains occur after gall-stone operations have been performed. Laparotomy has often been repeated in such cases and nothing abnormal found. The origin of migraine probably lies in disturbance of the fat metabolism.

All diseases of the liver may be summed up as being due to an alteration of its secretion whether of quantity or quality. It should be remembered that it is quite possible that the liver also performs endocrine functions in addition to its other physiologic activities. It appears from our present knowledge as to the formation of gall-stones that there is but one proved theory and that is *Stasis of the bile*. It is also interesting to note that probably as much uric acid is excreted by the liver as through the kidneys, and that there is always an insufficiency of the liver, confirmed by functional test, in melancholia.

Therefore a physiologically active liver is necessary for a normal bile, one which is sufficient in quantity and sufficiently fluid in consistency to flow freely and containing a normal percentage of bile acids. Before attempting the treatment of liver diseases it is absolutely essential to rule out epigastric hernia; duodenal and gastric ulcer; pelvic lesions in women, and *emphatically syphillis, acquired and congenital.*

The treatment of liver diseases almost up to the present has been surgical with more or less success—mostly less. The removal of stones from the biliary apparatus, like removal of the thyroid gland, merely removes the manifestation of the disease not its cause.

The surgical drainage of the gall-bladder is inadequate in that it can only be maintained for a limited period of time.

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The removal of the gall-bladder quoting an authority (F. W. Parham). Instead of saying that the gall-bladder should always be removed, except when contraindicated by the operative risk, I desire to reverse the formula and say the gall bladder should only be removed on account of definite crippling pathology which will preclude restoration to useful function, for the removal of the gall bladder changes physiological relations, which should never be done without adequate reason.

In conclusion, after an experience covering the past four years, I am convinced that the duodenal drainage of the biliary apparatus and the use of proper medicaments introduced into the duodenum has much to offer toward a cure for this class of diseases.

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A POINT IN THE CONSTITUTIONAL TREATMENT OF DELAYED RECOVERY OF OPEN FRACTURES*

FRED S. CLINTON, M.D., F.A.C.S.
TULSA

The progress toward recovery in open fractures sometimes seems to be arrested without any apparent or assignable cause. Adequate reduction, retention and effort at restoration having been employed yet healing of bone and soft parts fails to reward the patient and physician.

In cases of delayed or non union, or where there remains an outside wound requiring dressings longer than usual, after diligent effort to exclude the general causes such as syphilis, alcoholism, nephritis, diabetes, etc., or local causes such as improper reduction and imperfect immobilization or intervention of muscle, fascia, or detached bone or other foreign body, or involvement of blood vessels or nerves, or presence of undrained area or infection, assuming that patient has had proper food and care, yet healing does not take place, one must look elsewhere for aid. In such cases it has been the writer's experience for many years to use Iodide of Potash beginning with ten drop doses of saturated solution three times daily with beneficial results even though no luetic condition was demonstrable. The dose may be increased as indicated.

It must be understood that this does not supplant all indicated mechanical measures for relief such as massage, rubbing ends of bone together, hyperemia or other operative measures.

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INTERNAL PODALIC VERSION: PERSONAL EXPERIENCE WITH THE POTTER METHOD*

LEE DORSETT, M.D., F.A.C.S.
ST. LOUIS, MO.

It is with sincere pleasure that I appear before you today and I wish to take this opportunity to thank this society for its kind invitation to address you on a subject that has interested me greatly for the past three years.

The Potter version has created considerable stir in the obstetrical world and has been lauded and condemned by numerous writers. The method when put into practice has been the means of saving the lives of many babies and I regret to say has been the instrument in the hands of the unqualified for the death of some babies.

Internal podalic version is not a new method of delivery, neither is Potter's technique new. What Dr. Potter has done is to pick certain steps from the technique of others and combine them in a method of his own.

Potter believes in the delivery of all women in labor by version. I agree with him when it comes to his own work; any man who delivers, himself, 1200 to 1400 women a year, must use a rapid method of delivery. Potter can do this delivery most successfully, but to say that every one who practices obstetrics can do this will be fatal to a large number of babies.

What I want to say is this; that when a physician wishes to perform version he should follow Potter technique. As far as the indication for version, that remains to the good judgment of the operator. I have seen Potter work, and since coming home from his clinic have done a considerable number of versions, and from my own personal experience I am going to give you what I have learned.

First I will mention what I consider contraindications.

1. A generally contracted pelvis.
2. A rachitic pelvis.
3. A contraction ring of the uterus.
4. A non-effaced (not fully dilated) cervix.
5. A hydro-cephalic fetus.
6. An abnormally large fetus.

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7. A disproportion between fetus and pelvis.

Personally, I feel that the following are within the conservative range as far as the indication for this operation is concerned.

1. Persistent occiput posterior.
2. Prolapsed cord.
3. A protracted labor where other conditions are normal.
4. In cases of anti-partum hemorrhage.
5. Transverse presentation.
6. Where high forceps would be used.

In regard to the operation I want to emphasize several points. The administration of the anesthetic is one of the most important factors in a successful version. We use chloroform exclusively for the reason that a patient is anesthetized with less drug, the baby for this reason receives less, the patient goes under more quickly and awakens more quickly. When the child has been turned and it has been extracted as far as the buttocks the anesthetic is stopped; the patient begins to awaken, the uterus begins to contract, and thus flexion of the baby's head is increased.

The position on the table is important, as is the emptying of the bladder and the ironing out of the vagina.

As a word of warning I wish to say that a version should never be attempted until the patient is thoroughly anesthetized and the cervix is completely dilated. In my hands the manual or instrumental dilatation of the cervix followed by version and extraction has not been very successful. I have lost two babies in eclamptic cases where I was unduly hasty.

TECHNIQUE

1. The patient is placed on as high a table as is obtainable and anesthetized with chloroform.

2. The patient is then drawn down on the table until the buttocks are just over the edge of the table (in a modified Walcher position), the feet are lowered and are either held by two assistants or placed on two chairs. The vulva, perineum and adjacent parts are washed with soap and lysol solution or bichloride. The bladder is completely emptied.

3. The hand (preferably the left) is introduced into the vagina, and a goodly amount of liquid soap is poured into the vagina over the depressed perineum. The vagina is then dilated by a process of "ironing out"; this consist of a downward motion of the hand over the vaginal floor, palm down, beginning posteriorly and drawing forward. This proces should take from five to ten minutes.

4. After the vagina is well relaxed, the hand and arm of the operator (long rubber gloves should be worn) is well lubricated with soap. The hand in the form of a cone then enters the os and if it is not fully dilated, it is gradually stretched. Then hand and arm enter the uterine cavity pushing the head into the iliac fossæ, and passing upward. If the membranes are unruptured they are gently separated from the uterine wall, as the hand moves up into the uterus. At this point care should be used to avoid the placenta. When the feet are located, the hand is forced through the membranes (high up) and both feet are grasped. (It is absolutely esential that the foot be differentiated from a hand and this is easily done by the feel of the heel.) By steady traction downward on the feet and, if necessary, an upward pressure of the other hand of the operator on the abdomen of the woman, forcing upward and outward the fetal head, the feet are delivered, and when they are out of the vagina as far as the knees, the turning of the child is completed. With gentle traction, the hands being over the pelvis of the child, the trunk is delivered, the back of the child being always upward, it now lies transversely to the pelvic outlet. The whole process should be done with great deliberation, as up to this point there is absolutely no need of haste. When the trunk is delivered, the anesthetic should be stopped, so as to allow the uterus to contract, and thus aid in the flexion of the head. When the trunk is exposed, it should be wrapped in a warm, sterile towel to prevent stimulation and thus cause the child to gasp and aspirate any fluids.

6. With the body of the child in this position, it is given a half turn (the direction depending upon which diameter the head enters the pelvis) and the body drawn downward and backward until the edge of the scapula is under symphysis. The anterior shoulder is then delivered, the body rotated again until the posterior shoulder is anterior, and this is then delivered.

7. With the child astride the palm surface of the forearm, one or two fingers are introduced into the mouth and gentle traction made to flex the head. With slight pressure with the operator's other hand over the occiput of the child through the mother's abdominal wall flexion is promoted and the head slowly delivered until the mouth is out of the vagina; at this point the child is held and any mucus "milked" from the trachea, and the perineum allowed to dilate. There is no haste now, as the child generally gasps spontaneously. When the mucus is freed

from the trachea, the further delivery of the head is proceeded with. The child is then laid over the abdomen of its mother and will in a minute or two begin to breathe spontaneously. When the cord ceases to pulsate, it is cut, and 1 cc. of pituitrin is given before the placenta is delivered.

At no time during the delivery is any attention paid to the cord. It is often prolapsed but does not interfere with the delivery, nor is there any danger of it.

In conclusion I wish to say that it has been my experience that cases delivered by version show little, if any, post-partum complications, and there are less perineal lacerations and less injury to the baby.

Discussion: Dr. W. W. Wells, Oklahoma City.

We are certainly lucky to have a man like Dr. Dorsett to visit us and to give a paper and lantern slides on one of the most important obstetrical operations, that of internal version.

I am glad to know that Dr. Dorsett does not do a version as a routine delivery. I believe we are all finding more indication for version than we did before Potter gave us this new version.

The one thing that worries me most is the disportion, it certainly is a very serious affair to find after you have done a version, to find after you have a disportion that it is almost impossible to deliver the head.

I think Dr. Potter recognizes these conditions and does not attempt to do a version, but does a cæsarean section, that is the reason he does more cæsarean section than the average obstetrician.

Now in doing a version there is one maneuver that I wish to emphasize, and that is we must get the head well out of the inlet and up in the left iliac fossæ before we attempt to pull down on the feet. It will make the version easier. This is done by the right hand on the abdomen pushing the head upward and outward.

THE INSUFFLATION TEST AS A DIAGNOSTIC AND THERAPEUTIC AGENT IN STERILITY*

P. N. Charbonnet, M.D.
TULSA

Sterility in the absence of clinically demonstrable pathologic conditions of the pelvis is most common. Until Dr. Rubin of New York City introduced his technique for demonstrating the patency or non-patency of the Fallopian tubes, one of the most common cause of sterility passed unrecognized and women frequently submitted to all kinds of operative procedure, that with this new adjunct to diagnostic procedure, we now know to have been useless.

To briefly summarize the technique of the test: The apparatus consists of a carbon dioxide tank, fitted with a reducing valve to limit the pressure of the outflowing gas. This is connected by rubber tubing to a volumeter, (an instrument which measures the volume of gas passing through it); which in turn is connected to a Manometer, to give an index as to the pressure of the gas and then to the uterine catheter with which the gas is introduced into the uterine cavity. The catheter is fitted with a soft rubber urethral tip; which when pressed snugly against the cervix forms an air tight joint, preventing any escape at the external os.

In performing the test, the patient in the dorsal position, a bivalve speculum is introduced and the cervix, previously painted with iodine, is grasped with a vulsellum forcep. The catheter is now introduced into the uterus, beyond the internal os, and by steady traction on the vulsellum, close coaption is made between the cervix and urethral tip of the catheter. At first, an antiseptic solution of some kind was used in the vagina, covering the junction of the catheter and cervix to show by air bubbles whether any leak occurred. This, however, has been found unnecesary, as, by proper traction on the vulsellum the close contact between the cervix and soft rubber urethral tip makes an air tight joint. Moreover, any escaping gas is readily detected by a characteristic whistling noise made as it leaves the cervical orifice.

The gas is now turned on, being allowed to flow in, as determined by the Volumeter at the rate of 40 c.c. in approximately 20 seconds. Usually in the patent tube cases the pressure rises to 100 or 150 dropping suddenly to 60 or 80. It is advisable not to employ a pressure greater than 200; in non-patent cases; nor to allow more than 120 c.c. of gas to penetrate the abdomen in the patent cases.

In Dr. Rubin's original technique, immediately after the insufflation, Fluoroscopy was done to determine the presence of the gas in the abdominal cavity. It has, however, been found by other investigators that all patients, in whom the gas has penetrated the abdomen, suffer almost immediately, or at most, within a short time after rising from the table, of a characteristic pain in the right shoulder. This is deemed sufficient proof that the tubes are patent and that the gas

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has penetrated the abdomen. The gas is quickly absorbed and the pain rapidly disappears in the majority of cases. Having the patient assume the recumbent position for awhile favors its disappearance.

I have used the test in a series of fifteen cases, coming to me because of sterility. In all of these cases the husband's semen had been examined and in all but two cases were lively viable spermatozoa found.

Out of the fifteen cases, six with normal histories and no demonstrable pelvic lesions, showed closed tubes, that resisted several attempts at insufflation at a pressure of 200 and that were an absolute bar to conception. It is interesting to note that four of these women had had one or more operations; repeated dilations, curettages, etc.; in attempts to relieve the sterility. In seven cases, two of whom had husbands showing non motile spermatozoa, the gas went in at pressures ranging from 50 to 120 mm. One of these patients had an acute ante-flexion of the uterus. Another had an infantile uterus. Two showed retroversions. One with a history of amenorrhea lasting over a period of several years, showed large cystic ovaries.

This case was operated, one large cystic ovary removed, and some cysts on the other punctured. She was placed on ovarian extract, menstruated one month after the operation and her periods since that time have been regular.

In one of these cases, giving a normal menstrual history, married six years without becoming pregnant, the pelvic organs were found normal. The gas was introduced and allowed to reach a pressure of 200; not going through, it was released. At the second attempt the pressure rose to 180, then suddenly dropped to 130, then to 100. The patient complained of severe pain in the left side. One hundred and twenty c.c. of gas were allowed to flow. On rising from the table, she had the typical shoulder pain. She missed her next period, and a recent examination reveals a four months' pregnancy.

In still another case, a woman married nine years, the pressure rose to 200, dropping to 140 on the second attempt, the gas at the third attempt going through at 110. She had the typical shoulder pain. To date this case has shown no signs of becoming pregnant.

In none of these cases have there been any untoward or disagreeable symptoms, other than the shoulder pain; and abdominal pain in one case, which, in all cases disappeared within a few hours at the most.

CONCLUSIONS:

That the Rubin insufflation test is a valuable adjunct in the diagnosis and treatment of sterility, due to tubal closure.

Operations for relief of sterility are not justifiable without a preliminary tubal patency test.

The contra-indications to the test, are marked endocervicitis, endometritis, vaginal or pelvic infections. It should not be done near the menstrual dates.

The husband's semen should be examined in all cases of sterility.

The technique of the test is simple; practically painless, and no assistance is required.

In this small series of cases, over 50 per cent showed closed tubes, an absolute bar to conception; and a relief of this condition in two cases.

At least three attempts at introduction of gas should be made before it is definitely decided that the tubes are closed.

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PROCEEDINGS OF THE UNIVERSITY CLINICAL SOCIETY

OKLAHOMA CITY, OKLA.
NOVEMBER 23, 1923

DR. A. L. GUTHRIE: 1. A Case of Orbital Abscess. 2. A Case of Bezold's Mastoiditis. 3. A Case of Stricture of the Esophagus.

1. Case of Orbital Abscess: Patient came to the hospital on November 6th with the following history: Two weeks before entering hospital she had acute coryza accompanied by a furuncle in the left nostril. No particular attention was paid to the cold or boil at this time and they subsided without any apparent complications. One week before admission she complained of severe pain about the left eye and temporal region. Two days later eyelids became swollen and very tender. The following day patient noticed that eyeball protruded and she was blind in that eye. The pain continued and the swelling progressed until she entered the hospital. Physical examination upon admission: Temp. 102. Pulse 92. W. B. C. 11,800. The right eye was normal. There was marked swelling, redness and tenderness about the left eye and frontal region. Marked exophthalmus. The eyeball was pushed outward, downward and forward. Pupil slightly dilated and reacting sluggishly to light. Marked limitation of movement of eyeball but not paralysis of the extraocular muscles. Fundus slightly congested; veins

engorged and arteries constricted, but there was no distinct choked disc. The admitting physician made a tentative diagnosis of thrombosis of the cavernous sinus which was ruled out for lack of symptoms referrable to this region, viz., paralysis of the third, fourth, ophthalmic branch of the fifth, or sixth cranial nerves or any symptom referable to the other eye. A diagnosis of orbital abscess probably of ethmoidal and frontal origin was made. Radiograms substantiated the diagnosis of ethmoidal infection, with a possible involvement of the frontal sinus. On account of a heart complication the left ethmoidal sinuses were opened under local anaesthetic and drained both externally and intranasally. There was immediate relief from pain and the eyeball receded to a considerable extent. A second radiogram taken on the 9th showed a more distinct involvement of the frontal sinus than the previous picture so we decided to open this sinus externally. This was done under local anaesthetic and a great quantity of pus found. Following the second operation there was complete relief from pain and a further reduction of the exophthalmus. (Subsequent note: External wound completely closed and drainage into nose practically stopped. No appreciable return of vision. December 12, 1923).

2. Case of Bezold's Mastoiditis: This case is shown as a not infrequent type of pathology. Patient age 18 with a history of purulent discharge from each ear for the past ten years. An occasional ear ache but never any pain or swelling behind the ear previous to November 3, 1923, when a slight swelling developed low down behind the left ear accompanied by pain and tenderness. The discharge from left ear had stopped a few days previous to the onset of pain and swelling. Upon admission to the hospital readings were as follow: Temperature 101. Pulse 90. WBC normal. A diagnosis of chronic mastoiditis with an acute exacerbation was made. There was no tenderness over the mastoid antrum, no sagging of the posterior-superior wall of the external auditory canal nor any bulging of the tympanic membrane. The pathological process had gradually extended downward and inward from the mastoid antrum involving one mastoid cell after another reaching the surface on the inner aspect of the mastoid tip, in the digastric fossa, from whence it continued to spread into the soft tissues. This type is known as Bezold's Mastoid. The classical mastoid operation was performed and the above pathological diagnosis substantiated. These cases do not recover with expectant treatment and are distinct types for immediate and thorough operation.

3. Case of Stricture of the Esophagus. Child two years of age was brought to the hospital with a history of having swallowed lye some six weeks previous. Upon admission was not able to take even liquids and was markedly emaciated. Esophagus was inspected with esophagoscope and a rather firm stricture encountered just below the pharyngeal opening. A small bougie was passed and the child was able to take a small quantity of milk. A gradual dilation was instituted daily until at present solid food can be taken. The parents will be instructed that the stricture will have to be dilated frequently for the next year and then less frequently for several years and possibly the remainder of her life.

DISCUSSION (abstracted). DR. H. C. TODD: The cases of orbital abscess are very interesting and sometimes develop quite rapidly. I have seen three cases of orbital abscesses. A large percent of these cases are due, I believe, to a breaking through of an ethmoid infection into the orbit. The pain in these cases is often not a marked symptom.

The case of esophageal stricture is of great interest. These cases present very important phases for consideration. They are especially interesting to me, because in my hands the treatment for permanent cure has been so hopeless. If successful in passing the bougie through the stricture and the esophagus is sufficiently dilated the child may continue in a good condition for a certain period. The parents should be urged to have the bougie passed at frequent intervals, and not wait for further manifestations of the extreme symptoms before doing so. This will give the only assurance of safety to the life of the child.

DR. L. M. WESTFALL: *A Case of Bullet Wound of the Right Eye.* J. W., admitted to the hospital 11-7-23 4 p. m. Accident had occurred that morning. Examination showed upper and lower lids very much swollen and discolored, separated with difficulty. Swelling extended over right temporal region. A small opening was seen in skin above, in line with posterior margin of external auditory meatus, and in line with upper ear margin. Wound in cornea slightly external and below center. Part of lens and vitreous presenting. Vision of course destroyed. Boy was very drowsy; when aroused would reply to questions as if very sleepy. Older brother who brought boy to hospital stated that the boy had been very drowsy since accident. Temperature 99; pulse 86.

The scalp wound suggested the probability of the bullet's exit which was confirmed by radiographs the following morning. Small particles of lead, however, were retained.

Radiograph did not indicate course or exit point of bullet. As the eye was destroyed its immediate removal was imperative.

The following morning the patient's general condition was slightly improved and ennucleation was done under ether. When first seen, the important question was whether or not the bullet had penetrated the cranial cavity. Eye on removal showed bullet had emerged from eye about one-fourth inch external to optic nerve. My belief is that bullet entered from left angle at a time when eyes were turned to left; the bullet emerging in temporal fossa passing backward under skin for a short distance. The stupor on admission is accounted for as shock and a slight concussion.

The mental condition cleared in about 24 hours. There was swelling in front of the ear for about two weeks which gradually receded. There was never any pain over this even on pressure.

DR. LUTHER EMMETT HOLT

Dr. L. Emmett Holt, who died in Peking, China, on January 14, 1924, will perhaps be longest remembered as the author of a book, "The Care and Feeding of Children," which, through twelve editions, has been for twenty-five years an authority in the homes, not only of the United States, but of South America and Europe, and in China and Japan, where it has been invaluable in medical missionary work.

Recognized as a physician of the highest rank and standards, his influence with his profession was invaluable in removing doubts concerning the value of popularizing health education. After the Child Health Organization program had grown up under his stimulating leadership, he enthusiastically joined with several directors of the American Child Hygiene Association, of which he had formerly been president, in bringing about an actual consolidation of these two great organizations in the American CHILD HEALTH Association, of which Secretary Herbert Hoover is the president, and of which Dr. Holt served as First Vice-President from its beginning.

Dr. Holt was born on March 4, 1855, at Webster, N. Y., was graduated from the University of Rochester in 1875, took his master's degree three years later, and, in 1880, was graduated from the College of Physicians and Surgeons of Columbia University. Later, when his work had brought him fame, he received the honorary degrees of LL.D. from Rochester, and Sc.D. from Columbia and Brown Universities.

Dr. Holt's activities covered a wide field, but were devoted to a single interest. From 1890 to 1901, he was Professor of the Diseases of Children at New York Polyclinic, and from 1901, he was Professor of the Diseases of Children at the College of Physicians and Surgeons. At the time of his death, he was physician-in-chief at the Babies' Hospital, member of the Board of Directors and Secretary for the Rockefeller Institute for Medical Research, and Trustee of the University of Rochester. He was a member of the Association of American Physicians, retiring president of the American Pediatric Society, and a trustee of the New York Academy of Medicine.

He conducted important research on infant metabolism and was the author of a number of pediatrics papers. His book on "The Diseases of Infancy and Childhood" has been the standard text book in pediatrics in the medical schools of the country.

Though nearly seventy years old, he went to China in August, 1923, as special lecturer at the Union Medical College in Peking, an institution maintained by the Rockefeller Foundation. His death is a loss, not only to the nation, but to the world, whose children he made it his mission to save and serve.

THE OCULIST

Owing to the fact that **ethical** physicians do not advertise, the general public frequently does not realize the difference between the **oculist** and the **advertising eye specialist,** and very often has its eyes examined by the latter, believing that it is receiving the services and attention of a **physician.**

The Word **"Doctor"** or the prefix **"Dr."** does not always mean a **"Doctor of Medicine,"** but the letters **"M. D."** at the end of the same signifies physician, **"Doctor of Medicine."**

The **oculist** is a physician, a specialist in the diagnosing and treating diseases of the eye and the correcting of abnormal conditions of the refractive media of the eye by scientific examinations and the prescribing of the proper correcting lenses.

As many serious organic disturbances make their first appearance in the eye, the **oculist,** because of his knowledge of the practice of medicine, is the first to recognize the diseased condition that may exist and both under the law and by his knowledge is in a position to consult with your attending physician, if necessary; it is manifest therefore that the interest of the patient can best be served by the **oculist.**

While **poor vision** is not in all cases due to a pathological condition, very frequently the vision may be improved by the use of lenses and a pathological or **diseased condition entirely overlooked.**

A common practice, due to a lack of knowledge, is to give concave glasses when either no glasses or convex ones are needed. The effect of concave lenses is to make objects appear blacker and more distinct, so that the patient thinks his vision is improved, but the net result is eye strain, with its symptoms of headaches, sleepiness, etc.

It is without question, therefore, that the safest and most reliable way is to first consult an oculist, feeling certain that if glasses are needed they will be prescribed and in case they are not, you will be frankly informed and such advice given as may be necessary.

The Optician

A mechanical workman experienced in the grinding of lenses, the assembling and manufacturing of frames and mountings.

The dispensing optician is one who has had extensive experience as a mechanical optician and who is qualified to accurately adjust, take measurements and fit correctly frames or mountings to the patient after the oculist has made the examination for any refractive errors. The Optician is not qualified to do refractive work and should not be confused with the **Oculist.**

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DR. CLAUDE A. THOMPSON.....Editor-in-Chief
508 Commercial National Bank Building, Muskogee, Okla.
DR. P. P. NESBITT.....Associate Editor
710 Surety Building, Muskogee, Okla.

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Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 508 Commercial National Bank Building, Muskogee, Oklahoma.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds unapproved by the Council on Pharmacy of the A. M. A., will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

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EDITORIAL

SCIENTIFIC SEARCHLIGHTS ON THE ABRAMS MACHINE

On the theory that "every knock is a boost" THE JOURNAL often hesitates to condemn or comment upon many factors supposedly connected with medicine for the very good reason that it will be almost surely misunderstood by the layman. In the first place our columns only reach the physician and many of our members are not aware of their contents. This is evidenced by the many inquiries as to the next meeting place, the names of some official, whose name is often printed monthly in the JOURNAL and similar unnecessary requests. In one thing, however, proper propaganda has been taken entirely away from our profession and, we are glad to say lodged by and with undisputed and unbiased authority and in such manner and means as will unquestionably do the most possible good. We allude in this instance specifically to the merits or lack of merit of the so called Abrams ossiloclasts. Mr. Ford's *Dearborn Independent*, *Hearst's International* and lastly *The Scientific American* have undertaken investigations of these farces and placed them before the general public. The articles are prepared, not by physicians, whose motives and findings, regardless of their honesty and correctness would most surely be charged with unfairness, but by the most technical electrical authorities. These findings, not yet completed by the *Scientific American*, all indicate there is absolutely no basis for the claims of those who rushed into the advertising pages of our dailies with their "blood will tell" appeals to the ever gullible and very ignorant public. *The Dearborn Independent*, that is their skilled, trained observers fail to find anything meriting the claims of these vultures, exposing the whole thing to the open scorn and question of all honest men. We have only one observation to make in this connection. So far as we are aware no physician entitled to any claim except to that of inefficiency, unpreparedness to grapple with any scientific matter and a low order of mediocrity has undertaken to foist this last outrage upon the public. The very class of sponsors of this "great discovery" should have at once branded it with the gravest question marks.

ANNUAL MEETING AT OKLAHOMA CITY

Upon advices that the city of Ardmore felt unable to care for the Annual Meeting of the State Association in May, the Council selected Oklahoma City as the meeting place, after the Executive Committee of the Oklahoma County Medical Society was apprized of the situation and extended invitation to meet in the Capitol City. This change is regrettable insofar as the great inconvenience caused by the lateness of Ardmore's decision. Many firms and visitors had made plans based upon that place and a different date, all of which must be necessarily revised. Oklahoma City, however, is the city of all ours where meetings are always successful as they can be, where their clinics are unusually interesting and helpful and where there is less complaint as to many difficult details sur-

rounding arrangements than is had from any other place.

Several years ago it was attempted to select the three largest cities in the State for meeting places, but the matter was defeated in the House of Delegates. This action was taken in a city where only two days of a three day program were used and where there was a great deal of dissatisfaction. It is to be hoped that hereafter the matter of selection of the annual meeting place to be given due consideration from the standpoint of availability, convenience of access, accommodations, and above all things unquestioned ability on the part of the local profession to care for such an affair.

Now, therefore, our members may write the date in their minds as May 13, 14, 15, 1924.

Editorial Notes—Personal and General

DR. A. J. WEEDN, Duncan, is installing hospital facilities at Waurika, in addition to those he has at Duncan and Marlow.

DR. J. ARTHUR MULLINS, Marlow, has been appointed local physician for the Rock Island Railroad.

DR. H. O. GOWEY, Newkirk, was summoned to the bedside of his mother at Pleasant Plains, Iowa, who was very sick and not expected to live.

DR. V. C. TISDAL, Elk City, is planning to build a new hospital, 48x100 feet, modern in every respect, capable of taking care of 75 patients.

DRS. WILLIAM DAVIDSON and H. C. MANNING, Cushing, are sporting a fine new suite of offices in the First National Bank Building.

DR. J. C. WATKINS and family, Checotah, are motoring to Harlingen, Texas, where they will make their future home, Dr. Watkins having been at Checotah for eleven years.

CUSTER COUNTY MEDICAL SOCIETY has as new officers for 1924: Dr. W. I. Basinger, Butler, President, and Dr. C. H McBurney, Clinton, Secretary-Treasurer.

DR. T. M. BOYD, Norman, who has been associated with the Central State Hospital, is now in Brownsville, Texas, being forced to go there due to the condition of his health.

McCURTAIN COUNTY MEDICAL SOCIETY at its last meeting elected Dr. A. S. Graydon, Idabell, President, and Dr. R. H. Sherrill, Broken Bow, Secretary-Treasurer.

STEPHENS COUNTY MEDICAL SOCIETY officers for 1924: Dr. J. B. Carmichael, Duncan, President; Dr. J. W. Nieweg, Duncan, Secretary-Treasurer.

DR. E. L. INMAN, Eakley, has removed to Apache.

DR. C. O. GOSE, Hennessey, is visiting in California.

DR. P. B. MYERS, Apache, is attending the Northwestern University at Chicago.

DR. M. SHADID, Mangum, has removed to Elk City.

DR. B. T. BITTING, Enid, has located at Arapaho.

DR. J. H. KAY, Durant, has moved to Holdenville.

DR. J. A. MARTIN, Cushing, was a visitor at Rochester, Minnesota, last month.

DR. G. A. BOYLE, Enid, who was operated upon recently, is reported better.

DR. RURIC N. SMITH, Tulsa, and Miss Ruth Alice Ward of Ardmore, were married on January 15, 1924.

DR. CARL PUCKETT, Pryor, has been appointed State Commissioner of Health, over a large field of aspirants.

DR. W. S. IVY, Duncan, was called to Mississippi recently on account of the death of his father.

DR. A. S. NUCKOLLS, Ponca City, was elected head of the Ponca City Hospital staff at the annual meeting December 24.

DR. and MRS. B. F. STAVER, Bartlesville, returned from Kansas City where they were called on account of the illness of Dr. Stave's mother.

DR. HENRY S. BROWNE, Tulsa, and Miss Dorothy Malone of St. Louis, Missouri, were married at the Holy Family Catholic Church, Tulsa, on December 31, 1923.

DR. W. P. LONGMIRE, Sapulpa, spent his first vacation in 20 years with his parents in Anderson County, Tennessee, during the Christmas holidays, accompanied by his daughter.

ADAIR COUNTY MEDICAL SOCIETY new officers; Dr. Dorsey P. Chambers, Stilwell, President; Dr. Robert M. Church, Stilwell, Secretary-Treasurer.

JEFFERSON COUNTY MEDICAL SOCIETY has elected the following for 1924: Dr. M. L. Hutchison, Ryan, President; Dr. J. W. Watson, Ryan, Secretary-Treasurer.

CADDO COUNTY MEDICAL SOCIETY officers for 1924: Dr. C. N. Meador, Anadarko, President; Dr. E. L. Inman, Apache, Vice President; and Dr. Charles R. Hume, Anadarko, Secretary-Treasurer.

TEXAS COUNTY MEDICAL SOCIETY on January 9th, elected the following for its 1924 officers: Dr. William H. Langston, Guymon, President, and Dr. R. B. Hayes, Guymon, Secretary.

THE COOPER CLINIC, Fort Smith, announces the removal of its offices and laboratories from the First National Bank Building, to the Cooper Clinic Building, Little Rock Avenue and Thirteenth Street.

COMANCHE COUNTY MEDICAL SOCIETY elected new officers for 1924. Dr. W. J. Mason, Lawton, President; Dr. L. C. Knee, Lawton, Vice President, and Dr. Thos. R. Lutner, Lawton, Secretary-Treasurer.

DR. CARY W. TOWNSEND, Oklahoma City, City Health Commissioner, filed the first birth registration in Oklahoma City, for 1924, it being the record of the birth of his son, Cary Louis Townsend.

WASHITA COUNTY MEDICAL SOCIETY elected 1924 officers as follows: Dr. E. F. Stevens, Foss, President; Dr. A. M. Sherburne, Cordell, Vice President; Dr. B. W. Baker, Cordell, Secretary-Treasurer and Delegate, and Dr. A. S. Neal, Cordell, Alternate.

MURRAY COUNTY MEDICAL SOCIETY has the following new officers for 1924: Dr. J. T. Wharton, Sulphur, President; Dr. Howson C. Bailey, Sulphur, Secretary-Treasurer; Drs. George Slover, W. H. Powell and J. H. Simmons, all of Sulphur, Censors.

OKLAHOMA COUNTY MEDICAL ASSOCIATION has selected the following for 1924 officers: Dr. William H. Bailey, Oklahoma City, President; Dr. W. A. Lackey, Oklahoma City, Vice President; Dr. E. Lee Jones, Oklahoma City, Secretary-Treasurer; Drs. R. M. Howard, W. K. West and R. S. Love, Censors.

BRYAN COUNTY MEDICAL SOCIETY at its annual election selected the following to serve for 1924: Dr. C. F. Taliaferro, Bennington, President; Dr. H. B. McKinney, Durant, Vice President; Dr. John A. Haynie, Durant, Secretary-Treasurer; Dr. H. B. Fuston, Bokchito, Censor, and Dr. James L. Shuler, Durant, Delegate.

OKMULGEE COUNTY MEDICAL SOCIETY elected as new officers for 1924: Dr. J. L. Miner, Beggs, President; Dr. J. H. Neal, Beggs, Vice President; Dr. W. W. Stark, Okmulgee, Secretary-Treasurer; Drs. W. M. Cott, Okmulgee, V. Wallace, Morris, and W. C. Vernon, Okmulgee, Censors.

TILLMAN COUNTY MEDICAL SOCIETY elected the following new officers for 1924: Dr. C. Curtis Allen, Hollister, President; Dr. J. C. Reynolds, Frederick, Vice President; Dr. J. Angus Gillis, Frederick, Secretary-Treasurer; Drs. M. M. MacKeller, Loveland, and O. G. Bacon, Frederick, Delegate and Alternate; Drs. Harper Wright, R. E. Wilson, and J. C. Reynolds, Censors.

WOODWARD COUNTY MEDICAL SOCIETY at a regular meeting on December 5th, elected the following officers for 1924: Dr. C. J. Forney, Woodward, President; Dr. T. C. Leachman, Woodward, Vice President; Dr. C. W. Tedrowe, Woodward, Secretary-Treasurer; Drs. C. E. Williams and J. L. Patterson, Woodward, Censors; and Dr. J. L. Patterson, Woodward, Delegate; Dr. C. E. Williams, Woodward, Alternate.

NOWATA COUNTY MEDICAL SOCIETY met in regular session December 6 and the following officers were elected: Dr. J. P. Sudderth, Nowata, President; Dr. John R. Collins, Nowata, Secretary-Treasurer.

LEFLORE COUNTY MEDICAL SOCIETY met December 20 and elected for its 1924 officers: Dr. Harrell Hardy, Poteau, President; Dr. G. R. Booth, Leflore, Vice President; and Dr. Earl Woodson, Poteau, Secretary-Treasurer.

CHEROKEE COUNTY MEDICAL SOCIETY elected Dr. W. G. Blake, Tahlequah, President; Dr. P. H. Medearis, Tahlequah, Vice President; and Dr. Joseph M. Thompson, Tahlequah, Secretary-Treasurer.

GARVIN COUNTY MEDICAL SOCIETY on December 19 elected the following officers for 1924: Dr. C. M. Pratt, Lindsay, President; Dr. H. P. Markham, Pauls Valley, Vice President; Dr. J. W. Stephens, Pauls Valley, Secretary-Treasurer.

CANADIAN COUNTY MEDICAL SOCIETY officers for 1924: Dr. W. J. Muzzy, El Reno, President; Dr. C. M. Pierce, Vice President, Dr. James T. Riley, El Reno, Secretary-Treasurer; Dr. G. W. Taylor, El Reno, Censor, and Dr. T. M. Aderhold, El Reno, Delegate.

GARFIELD COUNTY MEDICAL SOCIETY met December 21 and elected new officers for 1924 as follows: Dr. John R. Walker, Enid, President; Dr. A. E. Wilkins, Covington, Vice President; Dr. D. D. Roberts, Enid, Secretary-Treasurer; Dr. T. D. Hinson, Enid, Censor; Dr. L. W. Cotton, Enid, Delegate.

GRANT COUNTY MEDICAL SOCIETY met January 11th and elected new officers for 1924 as follows: Dr. I. V. Hardy, Medford, President; Dr. S. A. Lively, Wakita, Vice President; Dr. Charles A. Brake, Medford, Secretary-Treasurer. A fine meeting was held; Dr. A. S. Risser, Blackwell, read a paper and made an address.

GRADY COUNTY MEDICAL SOCIETY new officers for 1924: Dr. A. W. Nunnery, Chickasha, President; Dr. U. C. Boone, Chickasha, First Vice President; Dr. J. F. Renegar, Tuttle, second Vice President; Dr. D. S. Downey, Chickasha, Secretary-Treasurer; Dr. J. C. Ambrister, Chickasha, Delegate, 1923-4; Dr. Martha Bledsoe, Chickasha, Delegate, 1924-5.

ROGERS COUNTY MEDICAL SOCIETY at its last meeting elected the following new officers for 1924: Dr. W. F. Hayes, Claremore, President; Dr. Caroline Bassman, Claremore, Vice President; Dr. Melvin T. Means, Claremore, Secretary-Treasurer; Drs. A. M. Arnold, Claremore, W. A. Howard, Chelsea, and J. C. Bushyhead, Claremore, Censors; Drs. F. A. Anderson, W. P. Mills, and W. S Mason, Committee on Health and Legislation

CRAIG COUNTY MEDICAL SOCIETY, at a regular meeting held at Vinita, elected the following members officers for 1924: Dr. F. M. Adams, Vinita, President; Drs. Wm. Campbell, Vinita, and C. F. Walker, Grove, Vice Presidents; and Dr. C. S. Neer, Vinita, Secretary-Treasurer. After a

dinner served by the hospital staff of the Eastern Hospital for the Insane, a clinic on Multiple Sclerosis was conducted by Dr. James E. Dwyer of Tulsa.

TULSA COUNTY MEDICAL SOCIETY Legislative Committee, has declared war to the finish on fake doctors and "quacks" in both city and county according to Dr. Charles D. Johnson, Chairman, and wholesale arrests and prosecutions are promised. The announcement came after a meeting of the legislative committee in Dr. Johnson's office, consisting of Drs. Johnson, A. W. Pigford, A. Z. Garabedian, J. C. Peden, M. W. Mayginnis, A. V. Emerson, C. H. Hall, and Charles H. Haralson.

OSAGE COUNTY MEDICAL SOCIETY met and elected the following for new officers for 1924: Dr. G. E. Stanbro, Pawhuska, President; Dr. E. N. Lipe, Fairfax, Vice President; Dr. Leonard C. Williams, Pawhuska, Secretary-Treasurer; Drs. G. W. Goss, C. E. White and Divonis Worten, all of Pawhuska, Censors. Speakers at the meeting were Dr. M. M. Rowland, Oklahoma City, on Malignancies of the Skin, illustrated by lantern slides, and Dr. G. F. Woodring, Bartlesville, on Bronchial Pneumonia of Children.

CARTER COUNTY MEDICAL SOCIETY elected the following officers: Dr. C. A. Johnson, Wilson, President; Dr. Walter M. Johnson, Ardmore, Vice President; Dr. S. DePorte, Ardmore, Secretary-Treasurer; Dr. F. W. Boadway and Dr. Walter Hardy, Ardmore, Delegates; Dr. A. G. Cowles and Dr. J. L. Cox, Ardmore, Alternates; Drs. T. J. Jackson, Marsden, G. E. Johnson, Ardmore, and J. C. McNees, Ardmore, Censors. The Society will hold a banquet at the Ardmore Hotel in February and the new State Health Commissioner is expected to attend.

EIGHTH ANNUAL CLINICAL SESSION of The American Congress on Internal Medicine will be held in the Amphitheatres, Wards and Laboratories of the various institutions concerned with medical teaching, at St. Louis, Mo., beginning Monday, February 18th, 1924.

Practitioners and laboratory workers interested in the progress of scientific, clinical and research medicine are invited to take advantage of the opportunities afforded by this session.

Address enquiries to the Secretary-General. Read the announcement on page iii, Advertising section.

Elsworth S. Smith, President,
St. Louis, Mo.

Frank Smithies, Secy.-Gen'l.,
1002 N. Dearborn Street,
Chicago, Ill.

OKFUSKEE COUNTY MEDICAL SOCIETY met on January 14 at Paden with a general meeting and a banquet at the Commercial Hotel. About forty persons attended the dinner and were entertained with a musical program. A business meeting was held at Dr. J. S. Rollins' offices, while the ladies adjourned to Mrs. Rollins' home for bridge and further refreshments. New officers elected for 1924 are: Dr. C. M. Bloss, President; Dr. A. J. Stephenson, Vice President, and Dr. R. Keyes, Secretary-Treasurer, all of Okemah. Among those attending were Dr. and Mrs. F. L. Carson, Shawnee; Miss H. K. Shaw, Shawnee, Dr. A. C. McFarling, Shawnee, Dr. and Mrs. W. M. Gallaher, Shawnee, Dr. and Mrs. N. Price Ealy, Castle, Dr. W. H. Davis, Castle, Dr. and Mrs. S. W. Burklin, Prague, Dr. H. C. Iles, Prague, Dr. R. L. Duncan, Prague, Dr J. A. Kennedy, Okemah, Dr. H. Wesley Yeats, Okemah, Dr. H. A. May, Okemah, Dr. C. M. Bloss, Okemah, Dr. A. A. West, Guthrie, Dr. and Mrs. C. C. Bombarger, Paden, Dr. and Mrs. J. C. Dovell, Paden, Dr. and Mrs. J. S. Rollins, Paden.

CUSHING MEDICAL SOCIETY elected Dr. H. C. Manning, Cushing, Vice President, to succeed Dr. J. V. Blair, recently removed to Burkburnett. In order to make the Cushing Memorial Hospital better known as a strictly up-to-date institution, with laboratory facilities; and an institution granting equal privileges to all physicians and surgeons with a reputable standing in Oklahoma; the Cushing Medical Society plants to start an advertising program soon, in an effort to get neighboring practitioners to treat their patients in this hospital.

PONTOTOC COUNTY MEDICAL ASSOCIATION were entertained by the President, Dr. S. P. Ross, and Mrs. Ross, at the Harris Hotel at Ada, on the occasion of their meeting on January 8. Music, entertainment, and a banquet were the features of the evening, which was also attended by the members' wives, and the nurses from the various hospitals. Among those enjoying the affair were Dr. Catherine Brydia and husband, Dr. and Mrs. Breco, Dr. and Mrs. Cummings, Dr. and Mrs. Lewis, Dr. and Mrs. Lane, Dr. and Mrs. Faust, Dr. Jeffries, Mrs. Bullock, Dr. and Mrs. S. A. McKeel, Dr. and Mrs. McNew, Dr. and Mrs. Webster, Dr. and Mrs. Dawson, Dr. Craig, Mrs. Lucile Cox, Miss Davis, Miss Rockefellow, Professor Fentem, Miss Emmaline Dawson, Miss Marjorie Jackson, Miss Lillian Strite, Burgess Steed and Duford Merritt.

POTTAWATOMIE COUNTY MEDICAL SOCIETY held its annual meeting January 10, 1924. Surgical Clinics were held at the Shawnee General Hospital beginning at 9:00 A.M. and continuing until 1:00 P. M. at which time lunch was served at the hospital. At 2:00 o'clock Medical Clinics were held in the hospital which continued until 5:00. At 7:30 the annual banquet was held at the Christian Church. About forty physicians were present and enjoyed the feast, after which they repaired to the auditorium where a feast of the mind was enjoyed. After the President's annual address, which was filled with wit, humor and science, the following officers were elected for 1924: J. M. Byrum, Shawnee, President, E. L. Yeakel, Shawnee, H. L. Cone, Maud, and E. F. Hurlbut, Meeker, Vice Presidents, E. E. Rice, Shawnee, Censor, T. C. Sanders, Shawnee, was re-elected Recording Secretary and W. M. Gallaher, Shawnee, Corresponding Secretary. Dr. L. S. Willour, McAlester, installed the officers in a very clever and able address. Dr. J. H. Scott, Shawnee, gave a short history of the Pottawatomie County Medical Society, after which several members and visitors gave brief and inspirational talks on lines of scientific research, organization and appreciation.

states that regeneration does not always occur, especially in adults: Failure of regeneration of the periosteum, with nonunion, is one of the disadvantages of the radical operation, and another is the difficulty of preventing deformities during recovery.

The mortality from the radical operation seems high in the author's opinion: Mitchell in complete resection of ten tibias had six deaths and in a partial resection of the same bone had two deaths. The ideal operation can only be performed, if an early diagnosis is made and when the inflammation is confined to the cancellous tissue, but we rarely see it at this stage. There is a great diversity of opinion among surgeons as to the treatment of this relatively common disease. Early and wide opening of the marrow cavity has been advised by many, while others advocate marrow exposure only when it is suppurating. Rast studied 226 cases of acute osteomyelitis operated on; in seventy cases the marrow was exposed and ten of them, or fourteen per cent died; in 156 cases the marrow was not exposed, the subperiosteal abscess being merely drained by a free incision, only 12 died giving a mortality of only 7 per cent.

The author believes that in acute cases in which a subperiosteal abscess has formed that drainage of the abscess is first indicated. If the fever does not subside and the general condition improve, or there is definite evidence of a suppurating process in the marrow, the cortical bone should be removed and the marrow drained. Gentleness in the removal of bone is necessary in order to prevent the formation of sequestrae. Sharp instruments should be employed and the healthy bone spared so as not to kill it.

A number of cases are cited in detail and all in all, this is a very instructive paper and should be read in the original by every physician, and this especially applies to the medical man.

OBSTETRICS and PEDIATRICS

Edited by Carroll M. Pounders, M. D.
532 Liberty National Building, Oklahoma City

RADIOGRAPHIC OBSERVATIONS IN CHILDREN CONSTIPATED FROM BIRTH.—I. H. Goldberger, Archives of Pediatrics, June, 1923.

The writer calls attention to the fact that in this age a surgeon would not attempt to set a fracture without the aid of the radiograph, yet case after case of chronic constipation of unknown etiology is treated without any more to guide one than a hurriedly obtained history that a child has difficulty in having daily evacuations; or that the stool is hard and dry and that the quantity is small. Cases running a chronic course, particularly those dating from birth, should receive intensive study and close observation. With the investigations there should be a proper appreciation of the anatomy and physiology of the gastro-intestinal tract and there should be a series of good roentgenograms, before deciding upon a diagnosis or determining upon any treatment.

It is necessary to determine the region of the bowel where the stasis occurs; whether in the distal colon and rectum or in the proximal colon. Also whether the condition is congenital or acquired. Under congenital causes are considered those due to anatomical peculiarities in structure and arrangement of the gastro-intestinal tract, such as elongated and redundant colon, dilated cecum, pyloric obstruction, pylorospasm, kinks, etc. The acquired cases consist of three distinct types, namely (1) the atonic (2) the spastic and (3) the obstructive.

Goldberger made a study of fifteen children ranging from seven months to seven years. All except one came under observation because constipation was the predominant symptom which compelled them to seek help. Some of them went as long as one week without evacuations and one boy had gone for ten days. Each child was given an opaque meal made up of one part of bismuth subcarbonate and eight parts of formula, fermented milk or farina, and had instilled into the colon an opaque substance made of one part of barium sulphat to six parts of fermented milk. The findings were enlightening and showed a number of interesting conditions. Such as elongated colon, megacolon, pyloric obstruction, spasticity of rectum, figure of eight colon, incompetent ileocecal valve, etc.

He points out that the great difficulty experienced in the treatment of patients with chronic constipation is the inability to keep them under treatment long enough to bring about permanent relief. When parents are shown where the seat of trouble lies, by exhibiting to them x-ray pictures showing the defects, they become permanently interested in the treatment.

It is epmhasized that cathartics do not solve the problem. The treatment and management is summarized:

1. The prompt withdrawal and discontinuance of all laxatives and cathartics.

2. The selection of some one in the family to supervise the child's daily routine.

3. Nightly instillations of warmed olive or sweet oil, in small quantities, high up into the colon at bed time. This is retained over night and until after breakfast the following morning, if possible. These are continued nightly for a period of at least four weeks, then every other night for two weeks, followed by intermissions of two nights, of three nights and gradually omitted until they are given but once a week, and finally at the end of ten weeks are left off entirely.

4. Regular attendance to toilet after breakfast and upon retiring, when child is made to remain until the bowel action is brought on. While at toilet the body should be flexed upon the knees, the feet supported on a box.

5. Plenty of exercise and free play.

6. The prescribing an adequate diet to meet the special needs of the individual child, especially where there is a history of taking plenty of protein foods that tend to cause intestinal putrefaction. These should be either limited or discontinued entirely.

The results in all the cases in the series reported, were 100 per cent satisfactory, measured by the ability of the child to have one, two or even three daily bowel evacuations, after treatment had been discontinued.

PYELITIS IN INFANCY WITH SPECIAL REFERENCE TO DIAGNOSIS.—A. Graeme Mitchell, Archives of Pediatrics, Nov. 1923.

Attention is called to pyelitis as being one of the commonly unrecognized causes of fever in infancy. The only localized symptoms manifested are slight disturbances of micturition and these are inconstant and so mild as to be easily over-

looked. Most cases occur in infants under two years of age. It is about four times as common in females as in males. The chief and only constant symptom is fever, ranging from 103 to 105 and being of an irregular septic type. There are probably many cases that go undiagnosed and run their course. It is common for the high fever of pyelitis to be attributed to an "intestinal upset." Fever without discoverable cause upon physical examination should always excite suspicion of the presence of pyelitis. No examination of a sick infant should be complete without a urinalysis. It may be a complication or sequel of most of the other diseases. The diagnosis rests upon the finding of pus in the freshly voided specimen of urine. It is better to examine the uncentrifuged specimen. More than two or three cells in each high power field is always suspicious. The absence of pus from one specimen does not exclude pyelitis, as it often does not appear while the temperature is high. The diagnosis will be rendered more accurate if the cells are counted in the same manner as white cells are counted in cerebrospinal fluid. When pus is present in large amounts it is more accurate to use dilutions as in making blood counts. If much clumping is present, vigorous shaking of the specimen and later of the diluting pipette is necessary. In health the urine of the infant and child contains two to four cells, or in females as high as 10 cells per c. mm. In concentrated urines there may be 20 or 30 per c. mm. When the count is as high as 60 per c. mm. it is quite certain an infection of the urinary tract exists. Large doses of potassium citrate are given during the acute attack, and at stated intervals afterwards, with the idea of preventing recurrence.

TUBERCULOSIS

Edited by L. J. Moorman, M. D.
611 1st Nat'l. Bank Bldg., Oklahoma City

STUDIES ON THE CHEMOTHERAPY OF SILVER AND ARSENIC COMPOUNDS IN EXPERIMENTAL TUBERCULOSIS.—Maurice I. Smith. The American Review of Tuberculosis, May 1922.

The author conducted a series of experiments upon a large number of guinea pigs, on the chemotherapy of some arsenic and silver compounds in tuberculosis. He concludes that neoarsphenamine and silver arsphenamine have a very slight inhibiting action on the growth of the tubercle bacillus in vitro. Colloidial silver oxide has no effect on its growth, while silver methylene blue has considerable inhibiting action.

None of these substances has any favorable influence on the course of the disease when administered to experimentally infected animals.

TUBERCULOSIS IN INFANCY AND CHILDHOOD.—Lawrence Weld Smith. The American Review of Tuberculosis, May 1922.

The author presents an unusual case of double miliary infection in a child of eleven years, in which the tuberculous infection was probably present for several months but was recognized only three weeks before death by a sudden and overwhelming generalized lighting up of the process.

He also presents the autopsy findings of 40 cases occurring in 200 consecutive autopsies at the Infant's Hospital during two years. He considers the age incidence the most striking feature. Six cases occurred in children under six months, eleven between six and twelve months, eighteen between twelve and fifteen months and five from sixteen to twenty-four months. He thoroughly analyzes the statistics given and concludes from the pathology that tuberculosis in infants is an entirely different disease from tuberculosis in adults. Its lesions are those of an acute infectious disease more of the order of typhoid fever or pneumonia. He deduces its tremendous prevalence from its high incidence, and the lack of immunity in infancy from a 20 per cent mortality in a hospital series of infants under two years. He urges the need for further preventive measures.

CORPORATION CARE OF TUBERCULOUS EMPLOYEES.—Robert A. Perrs. The American Review of Tuberculosis, April 1922.

This experiment is being worked out by the Standard Oil Company of California. The objects are twofold (1) to restore to work those whose disease has not progressed beyond hope of cure, (2) to furnish sanatorium care for life to those employees for whom there is no hope of recovery. With these objects in view all tuberculous employees are offered the opportunity of entering the Company sanatorium at Colfax. All patients are under the control of the medical superintendent. No patient is dismissed until able to take up light work which is prescribed by the medical superintendent. The treatment is that afforded by any well-conducted sanatorium.

The lifting of all financial worry and the solving of the problems of returning to home life and work are the biggest factors in the success of this experiment. The results so far justify the thought, time, energy and money expended in the work.

DEMINERALIZATION IN TUBERCULOSIS. DISTRIBUTION OF CALCIUM IN THE TUBERCULOUS GUINEA PIG.—O. Barkus. The American Review of Tuberculosis, April 1922.

It has been thought that in infected animals the concentration of inorganic material is high in normal and reduced in diseased tissue. The author desiring to test this theory and to determine the concentration of the various cations in tuberculous animals, infected guinea pigs with known strains of tubercle bacilli and sectioned the secretory organs immediately after the death of the animal. He paid particular attention to the calcium content because of its supposed importance for the issue of tuberculosis. No appreciable loss of calcium due to progressive tuberculosis could be proved in any case.

A FEW OBSERVATIONS ON IMMUNITY TO TUBERCULOSIS.—Allen K. Krause. The American Review of Tuberculosis, May 1922.

The tissues react initially with comparative vigor to micro-organisms which we call avirulent but although there is a transient pathological result, there is no infection in a true sense. This seems due to a native or congenital (species) immunity. The tissues react indolently at first to virulent bacteria, the germs maintain themselves

in the tissues and we have a true and lasting infection. After this infection the tissues take on new powers of reaction which consists in an exaltation and enhancement of their native qualities and through these they become relatively immune. The real tuberculosis "case" begins only with the establishment of the immune state, not with the fading of resistance. The immune state is conservative at bottom, but through and because of it, all types of tissue changes to the point of tissue destruction may occur. It may thus blot out the life of the body which its reaction is designed to preserve from bacillary invasion.

HEALING BY RESOLUTION IN EXPERIMENTAL PULMONARY TUBERCULOSIS.—Leroy V. Gardner. The American Review of Tuberculosis, May 1922.

The author has attempted to work out by histological study the mechanism of the healing process in experimental tuberculosis produced by an organism of known low degree virulence in the Saranac Laboratory. Twenty guinea pigs were infected by the inhalation method and killed at intervals of from two weeks to one year and five months. All had reacted to tuberculin. The lungs were carefully sectioned and many photomicrographs made. In arranging the series of photomicrographs no attention was paid to the element of time but an attempt was made to show the sequence of the histological development of the lesions. These photomicrographs demonstrated that the strain of tubercle bacilli used is capable of producing lesions which progress to caseation, and that this caseation together with the accompanying proliferation of fixed tissue cells is then absorbed. The healing process is one of resolution, of which no trace remains at the site of former infection.

It is not yet demonstrated that human pulmonary tuberculosis, being as it usually is, an autogenous infection upon sensitized soil, most of the time with virulent organisms, can heal by resolution. It is believed, however, that primary infections in the human body do disappear leaving no visible alteration in the tissues. The author believes it possible that such a mechanism as he describes may be involved.

OBSERVATIONS ON THE DIAGNOSIS OF ACTIVE TUBERCULOSIS IN CHILDREN.—Cole B. Bibson and William E. Carroll. The American Review of Tuberculosis, May 1922.

A statistical study of 265 cases admitted to the Meriden State Sanatorium during 17 months is presented. The author's attention centered particularly on the differential diagnoses and the question of activity. They were especially interested in the Wildbolz auto-urine test and consider it to be of real diagnostic and prognostic aid.

While it is impractical for use in general practice, it is of real aid in sanatorium work in classifying for discharge or further treatment of such cases as may be under observation. They feel that it abates to a considerable degree the difficulties of diagnosing tuberculosis in children.

A CRITICISM OF RECENT INTERPRETATION OF ANNULAR SHADOWS IN LUNG ROENTGENOGRAMS.—M. P. Burnham and Philip King Brown. The American Review of Tuberculosis, August 1922.

Until recently the "ring" shadows frequently seen in roentgenograms were considered evidence of cavity formation. Heise, Brown and Amberson have recently advanced the opinion that these shadows were not cavities but annular pneumothoraces. The authors believe this theory wrong and not supported by any proof. Localized and encapsulated pneumothoraces are easily recognized as such in their opinion, while cavity formation is recognized by a sign complex which consists of (1) more or less well defined ring shaped bands of increased density (2) marked diminished density within these bands, (3) linear markings of lung are not seen. Many variations of this sign complex are met with. Stereoscopic plates, with very short exposures, taken in the antero-posterior direction and at right angles to the antero-posterior plane are used in diagnosing these conditions. This subject is of growing importance not only in prognosis, but in deciding on therapy by collapse.

THE NATURE OF TUBERCULOSIS OF THE EYE.—William C. Finnoff. The American Review of Tuberculosis, April, 1922.

Tuberculosis of the eye occurs at all ages and in both sexes about equally, it is found most frequently, however, in young adults. It may be either primary or secondary. Primary tuberculosis of the eye is of exogenous origin and is found in the exposed parts; the eyelids, conjunctiva, cornea and lachrymal sac are the common sites. Primary intra-ocular tuberculosis not associated with trauma is rare.

Primary foci in some other part of the body are the source of infection of the eye in secondary tuberculosis. The bacilli passing into the blood stream, are carried to the eye and accidently lodging in ocular blood vessels produce eye tuberculosis. All parts except the lens may be attacked in this manner. It may be either acute, subacute or chronic. The acute type manifests itself as tubercles of the choroid associated with an acute miliary tuberculosis or with a tuberculous meningitis; or as an acute involvement of any of the ocular structures which often terminates in destruction of the eye-ball and necessitates enucleation. In chronic ocular tuberculosis the disease is usually confined to one portion of the eye with little or no pain and the progress of the disease is slow. Slight activity may be present over long periods of time and recurrences of activity after apparent cures are common.

Close co-operation between the ophthalmologist and the internist is very necessary in diagnosing and treating these conditions, many of which are obscure. Careful use of old tuberculin is recommended for diagnostic purposes. The treatment consists of hygienic measures, tuberculin and local therapy. It is advisable to continue treatment for several months after all evidence of activity has disappeared.

HELIOTHERAPY IN THE TREATMENT OF LARYNGEAL TUBERCULOSIS.—William C. Voorsanger. The American Review of Tuberculosis, May, 1922.

Laryngeal tuberculosis probably causes more discomfort to and more concern to those treating pulmonary tuberculosis than any other complication. The author assumes that one out of every three patients has some laryngeal involvement. All methods of treating it have failed and many have caused irreparable damage through cauterization and the accompanying tissue destruction and cicatrization. Obstructive swelling where the patient will either starve or choke to death is the only excuse for direct applications to the larynx.

He presents two cases in detail illustrating the failure of local applications and the success of reflected sunlight, using the solar therapeutic laryngoscope of composition metal. He considers his experience too brief to venture an opinion as to whether the results will be permanent but believes they will be if the pulmonary tuberculosis remains arrested.

THE PREVENTION OF TUBERCULOSIS.—Dwight M. Lewis. The American Review of Tuberculosis, May, 1922.

Two facts seem well established; (1) that practically everyone has the opportunity to contract tuberculosis during childhood, and (2) that in the main the disease is easily resisted and overcome. It seems evident that the disease whether bovine or human in type may be activated or reactivated by all forms of pathologic microorganisms and that the balance or resistance of the infected individual is measured by his defects in their relation to air and food metabolism. Any factor tending to the correction of anatomical defects and to the protection against contaminated water and filth-borne diseases is a vital one in the prevention of tuberculosis.

BACTERIOLOGY and PATHOLOGY

Edited by Wm. H. Bailey, A.B., M.D.
Wesley Hospital, Oklahoma City

ANTIGENIC RELATIONSHIPS OF BACILLUS TYPHOSIS.—Elliott S. Robinson, Brady Lab., Yale Univ. School of Med., Jr. of Bact., Nov. '23.

Conclusions: 1. Numerous typhoid strains show considerable antigenic differences.

2. This difference is not sufficient to permit the designation of types or groups.

3. Failure of a strain to be agglutinated by an anti-typhoid serum is not proof of the non-typhoid nature of the strain; nor is the failure of a serum to agglutinate a positive strain of typhoid proof of a lack of typhoid agglutinin in the serum.

This is a very interesting and valuable piece of research because it will help to explain why it is sometimes impossible to get a positive Widal agglutination test on the blood of a patient who has nearly all the other clinical symptoms of typhoid. Some may say, "Yes, it just helps to prove that laboratory tests aren't worth a darn." "You can't depend upon them." If you do depend upon them, to the exclusion of the evidence as presented by the other clinical symptoms, they won't be "worth a darn" to you. The laboratory has spoiled a lot of good clinicians, because, on the very dangerous ground of the positive or negative finding of a single laboratory test, it has been willing to say positively that such and such a disease is present or absent. The wise doctor will not let the laboratory lead him astray by such statements and the wise laboratory will not allow the doctor to make any such deductions from the laboratory findings. The sooner the laboratory and the doctor learn to consider laboratory findings only in conjunction with the other clinical symptoms, the better it will be for the patient.

AN ADEQUATE LABORATORY SERVICE IN THE MODERN HOSPITAL.—Ward Burdick, Denver, Colo., Secy. Amer. Soc. of Clinical Pathologists. Read before the Clin. Cong. of Amer. Col. of Surg. Chi. Oct. 1923.

Personnel: The personnel of the hospital laboratory should include, 1st, a clinical pathologist, (a graduate M. D.)

2nd, a young physician in course of training to become a clinical pathologist.

3rd, as many technicians as the requirements of the institution may demand.

Location: The laboratory should be on the top floor of the hospital, with a northern exposure, and as near to the operating room as possible. There should be at least 500 square feet for every 100 beds. The space should be divided into several separate departments, either sections of one large room or separate rooms, at least one private office and record room for the pathologist in charge.

Scope of Service: Routine blood counts and urinalysis on all cases. Coagulation time on all tonsil and adenoid cases. A Wassermann test on all chronic cases. Sputum on all chest cases. Blood cultures on all case with temperatures over 102 degrees lasting for three days. Throat cultures on all suspects and undiagnosed cases. Stools on all diarrheas. Smears and cultures on all discharges.

The average physician does not know exactly what laboratory work his patient should have, so does not order them. The above will many times assist in clearing up the case before the tests suggest themselves to him.

Finances: A "flat fee" is permissible only for the routine blood counts and urinalyses. Subsequent examinations to show the progress of the disease or the result of treatment should be charged for at the regular fee. The usual fees in vogue should be charged for the more complicated tests. The hospital laboratory should be financed by charging each patient for the work performed.

SPECIFIC HYPERSENSITIVENESS AS A COMMON CAUSE OF ILLNESS.—Dr. W. W. Duke, Kansas City, Mo. Medical Herald, July, 1923.

"A certain large percent of individuals inherit a constitution which makes it possible for it to become readily hypersensitive to foreign matter. Once sensitive, the individual may have severe symptoms of reaction whenever he comes into intimate contact with the substance to which he is sensitive. Patients are frequently specifically hypersensitive to certain varieties of pollen, less frequently to substances which can be extracted

from the stems, roots, leaves or woody matter of plants, also to products obtained in the distillation of coal, wood and crude oil, also to animal hair or feathers or to dust, smoke, foods, infectious products, insects, etc.

"Contributory causes are non-specific irritations of any sort, reflexes, infectious, functional or organic diseases. The immediate effect of a contributory cause often deceives the patient and leads him to blame it for his illness rather than the primary cause—specific hypersensitiveness.

"The more common symptoms are the ocular, nasal, pharyngeal, bronchial, cutaneous and reduced blood pressure, less often gastro-intestinal, neurological, joint, bladder and obscure symptoms.

"The diagnosis can be made in a majority of cases through information gained by history, physical examination, cutaneous tests, ophthalmic and clinical tests. The condition can be relieved in a large percent of cases by avoidance of the substance to which they are sensitive. When this is impossible or impractical, specific protein treatment is justifiable. Adrenalin is useful for temporary relief."

THE EPIDEMIOLOGY AND PREVENTION OF DENGUE.—M. D. Levy, M.D., Houston, Texas. Texas State Journal of Medicine, July 1923.

Dengue is essentially a coastal disease. The transmission of the disease has long been associated with the mosquito and all recent work has proven this true. At first the culex quinquefasciatus was thought to be the cause but experimental work has proved this not to be true; both in Texas and in tropical countries where the disease is prevalent but it has been proved beyond a doubt that the Aedes aegypti is the cause.

The more or less persistent belief that dengue is in some way related to yellow fever or that yellow fever frequently follows dengue is due to the unguarded statements of some physicians. The similarity in the epidemiology of the disease is probably the basis of this belief and the mass of evidence in recent years has proved that both diseases are conveyed by the same species of mosquito, however, experiments have proven conclusively that the organism of dengue is not any known protozoan form.

Four different types of dengue have been distinguished. (1) The Evanescent type with only a slight attack of fever. This type is so mild it would hardly be recognized except during an epidemic. (2) The Interrupted fever type and (3) the Saddleback type are very similar and are the types usually encountered during an epidemic. (4) The Continued fever type is rare and does not show the remissions or intermissions of temperature so common in the usual forms of the disease. To these there may be added similar diseases under other names such as the seven day fever of India, which is now considered a form of dengue.

The occurrence of these varieties of disease in different parts of the world would suggest that it is possible for others than the Aedes aegypti to transmit the disease.

The prophylaxis or prevention of dengue is—"get rid of the mosquitoes."

From a public health standpoint we might almost wish dengue were more fatal so that the people would give the same cooperation as they have in the eradication of yellow fever. It is obvious that with the first appearance of the disease in a community, isolation and screening should be done immediately. A few careless dirty individuals in a community may nullify any campaign against the mosquito by leaving vessels filled with water standing around.

To sum up, dengue can be eliminated by the co-operation of the public with sanitarians and public health officials and only in this way may we hope for its eradication.

THE PREVENTION AND TREATMENT OF DIPHTHERIA.—Lee Rice, M.D., Texas State Journal of Med., Dec. 1923.

Diphtheria carriers are found to vary between 2 per cent and 7 per cent of population. Milk-borne epidemics are not infrequent and water supplies may carry virulent organisms. Very young infants are relatively immune to diphtheria, while children between the ages of one and six have an immunity of less than 40 per cent. Adults, on the other hand, have a high immunity, around 90 per cent, but they contain that susceptible group of carriers which is so essential a factor in the occurrence of epidemics.

The highest susceptibility of diphtheria is found in children of pre-school age, but during the first years of school exposure to carriers and to actual cases is more frequent, and it is usually the school child who carries the disease home to some younger child.

The largest work of prevention should begin in the public schools. Sidbury states that over 95 per cent of diphtheria could be eliminated from this country if the Schick Test and Active Immunization by toxin-antitoxin mixtures were generally and intelligently used.

Diphtheria toxin may and can be fixed by the body cells within six hours. If this misfortune arises in any case no amount of antitoxin that may be given will be of any avail as far as neutralizing that fixed toxin. Early diagnosis is, therefore, of the utmost importance. This can be made by suspecting and culturing every membrane on the throat or bloody discharge from the nose. Of even more importance than this is the learning of the early clinical symptoms of diphtheria so that we will have the courage to give antitoxin at once and not wait even 12 hours for the report from the laboratory on our cultures.

EYE, EAR, NOSE and THROAT

Edited by Jas. C. Braswell, M. D.
726 Mayo Bldg., Tulsa

FURTHER OBSERVATIONS ON A NEW METHOD OF PREVENTING POSTOPERATIVE INTRA-OCULAR INFECTIONS: A REPORT OF 1,250 SUCCESSFUL CASES. Bell, G. H., Arch. Ophth., 1923, lii, 436.

The author recommends a preliminary irridectomy in every case of cataract following twenty years of experience in which time he has had 1,250 cases without a single primary infection. The technique is as follows:

Focal infections such as diseased teeth and tonsils, and toxaemias of the intestinal tract are overcome two or three months preceding the operation. Then, if the eye appears clinically clean the opera-

tion is performed regardless of the bacteriological findings.

Twenty-four hours before the operation a dose of castor oil is given to cleanse the intestinal tract.

Two hours before the operation a smear of the conjunctival sac is taken and two drops of a 1 per cent solution of silver nitrate are instilled into each eye. On the operating table, the brow, eyelids, and adjacent skin are washed with castile soap and the eyes are washed out with normal saline solution.

During the operation sterile rubber gloves are worn by the surgeon's assistants, and a conjunctival flap is formed.

After the operation, two drops of a sterile solution of atropine 3 per cent and a twenty five per cent solution of argyrol is used and both eyes are bandaged for forty-eight hours. Thereafter the eye is dressed and atropine and argyrol are instilled every two days.

In doubtful cases, silver nitrate is instilled in the eyes five hours and two hours before the operation.

STRICTURE OF THE ESOPHAGUS FOLLOWING SCARLET FEVER.—Porter P. Vinson, Laryngoscope, 1923, xxxiii, 949.

The author reports two cases of stricture of the esophagus following scarlet fever. In the first case the chief complaint was difficulty in swallowing solid food. The patient, a girl eight years of age, had an attack of scarlet fever one year prior to the time of examination. Following this attack she was unable to swallow solid forms of food and when an attempt was made to swallow solid food it was regurgitated with a large amount of mucus.

A roentgenograph examination of the esophagus revealed an obstruction at the juncture of the middle and lower third of the organ. On passing a sound a stricture was located 25 cm. from the incisor teeth. This was easily dilated to 38 F., but the child was not able to remain under observation long enough to obtain permanent relief. However, in spite of insufficient dilation, her present condition is quite good and she is able to swallow better than before the stricture was stretched.

The second case occurred in a woman thirty-eight years of age. She had an attack of scarlet fever at the age of seven, and immediately afterward, difficulty in swallowing was noted. This would last only one or two days at a time and occurred rather infrequently. There was relatively little discomfort from the age of ten to twenty-three years. At the age of twenty-eight esophageal closure was complete for several days, and two years later a similar attack lasted for six days. During the latter part of February 1922, there was another period of complete closure, and for two weeks before examination she had been able to swallow liquids only.

Roentgenographic examination revealed obstruction in the lower portion of the esophagus and on passing a sound the stricture was located 33.8 cm. from the incisor teeth. The stricture was gradually dilated to 42 F. with complete relief from dysphagia.

A STUDY OF SINUSITIS IN CHILDREN, PRELIMINARY REPORT.—John M. Lore, Laryngoscope, 1923, xxxiii, 941.

The author quoting Dean states that from 70 to 80 per cent of the cases of sinusitis in children get well after a tonsil and adenoid operation is performed. The difficult cases occur in the 20 to 30 per cent which fail to get well after the tonsils and adenoids are removed. In this group of cases the vast majority are ambulatory and it is difficult to hospitalize these cases.

These cases are usually undernourished and in the majority it was found that milk was seldom used. Some cases, however, used a well balanced diet.

The author reaches the following conclusions:

Tonsils and adenoid operation when first operation was unsuccessful.

Correction of diet when indicated.

The use of cod-liver oil in all cases.

Nasal hygiene by means of suction-irrigation, argyrol lubricants, etc.

Antral lavage when indicated.

Correction of deflected septa when drainage is interfered with.

Uncapping of ethmoids and sphenoids only in severe cases when the above treatment has not helped, as in cases of polypi.

POSTOPERATIVE COMFORT IN TONSIL CASES.—Harkness, G. F., and Rock, J. E. J. Iowa State M. Soc., 1923, xiii, 331.

The authors reached the following conclusions from replies received to a questionnaire concerning the methods used to overcome the discomfort following tonsillectomy.

1. Pain is the chief problem after this operation.

2. There is extreme diversity of opinion in regard to its relief.

3. It is generally agreed that postoperative pain will be considerably less if care is taken not to injure the pillars during the operation.

4. Some surgeons give one-fourth grain morphine and one-one hundred and fiftieth gr. of atropin one-half hour before the operation. Within the first three hours after the patient returns from the operating room the morphine is repeated. Later, it is again repeated, the dose then being one-sixth or one-eighth gr. An ice collar is worn most of the first twenty-four hours.

5. Before and often between meals, a gargle of 24 gr. of aspirin in 4 oz. of water is given and the patient is urged to swallow some of the solution.

6. The semi-suspension method is used to pull up on the angles of the jaws during eating and drinking, and the patient is urged to take a considerable quantity of fluid.

7. Orthoform, anaesthesin, and various other powders have not been found satisfactory.

8. Alkaline gargles and irrigations, preferably hot, are used three times daily.

9. Swabbing the fossae with castor oil or liquid petrolatum and gargling with aspirin solution has a soothing effect.

ORTHOPAEDIC SURGERY

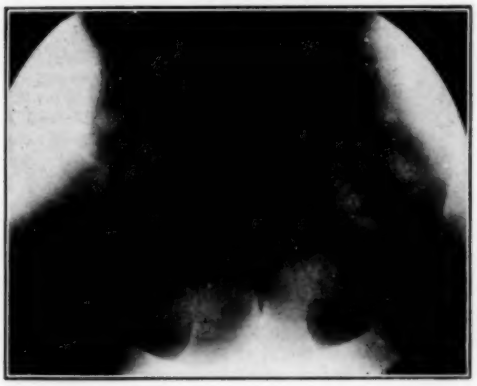
Edited by Earl D. McBride, M. D.
1006 First Nat'l. Bank Bldg. Oklahoma City

1. Clinical Case Report.

CONGENITAL DISLOCATION OF HIP.—W. M., age 4 years admitted to St. Anthony Hospital May 11, 1922.

There was just one symptom which brought this child for treatment, i. e., a limp. This limp was noticed at the age of one and one-half years but the child had been ill a great deal, and had developed a heart lesion so that nothing was done. Weight at birth was six and one-quarter pounds. Forceps delivery. Bottle fed. Had influenza, whooping cough and pneumonia twice. Frequent sore throat led to removal of tonsils one year ago. Boy is well at the present time and plays just like other children of his size.

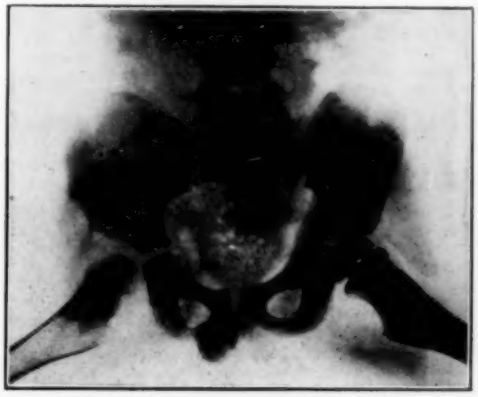
On physical examination we find a well nourished boy of four years who walks with a marked limp in which the left hip seems to give way to the weight of the body at each step. Measuring from the anterior spine to internal malleolus, the left leg is one inch shorter than the right. Abduction is limited to 50 per cent of normal but other



Before Reduction

motion normal. Trendelenburg sign is positive, i. e., when he stands on left leg and flexes the right knee on the trunk, the right hip is lowered instead of elevated. With finger on trochanter and thumb placed slightly internal to the pulsating femoral, immediately below Pouparts ligament, the head of the femur can be felt to rotate under thumb on the right side, but is missing on the left and felt above acetabulum in a new socket. The acetabulum is well formed.

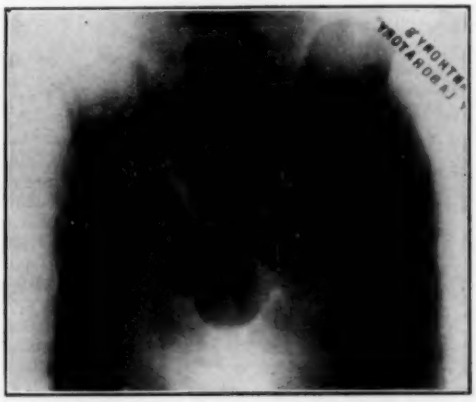
Discussion: The heart in this boy produced the questionable factor in regards to treatment and prognosis. There was a heart murmur at the apex of the most astonishing type. It was transmitted to the back. There was considerable enlargement. Without going into detail on the diagnosis of the cardiac lesion, suffice it to say that about twenty-five doctors examined this patient which was demonstrated at a meeting of the State Medical Society, and only two held the opinion that it was safe to give an anesthetic and reduce the hip. Judging from activity of the boy, the heart was well compensated, and anesthetic for tonsilectomy one year previous, was uncomplicated, so the operation for reduction was performed.



In Cast After Reduction

There are numerous methods employed for this operation, and numerous machines and tables to facilitate matters. A few prefer the open method but closed reduction is the more popular. The first reduction on a living subject was by Humbert in 1830. It was not until Lorenz demonstrated the importance of permanent fixation for a long period that the operation became practical.

The writer uses a modified Lorenz method. The abductors were stretched while thigh was flexed at right angle and the knee then forcibly extended, to stretch the posterior soft tissues. Traction was then made on the leg for ten minutes, with five minute intervals. With the thumb pressing upward on the trochanter the thigh was fully flexed and abducted in a circular manner, rotating outward and downward. The reduction took place with a snap which indicated a deep acetabulum and a favored prognosis. A plaster spica was applied including hips and all of left leg, with the thigh in complete flexion and abduction and knee flexed. This cast was changed in ten weeks and another applied in the same position. The child was allowed to walk the best he could, casts were changed every eight to fourteen weeks. At the end of one year the leg was brought to normal position and cast removed. Two years later X-Ray showed good reduction.



After Treatment

OPEN INTERVENTION IN MALLEOLAR FRACTURES.—G. Picot, Jour. de Chir., 21, 529, 1923.

The irreducibility of certain malleolar fractures and the poor results in those not completely reduced led the author to operate on twelve recent cases. All showed fractures of the posterior margin of the tibia which were not always visible in the X-ray plate.

An operation suitable for the majority of cases is described. The approach is by a J incision along the lateral border of the tendo Achilles and swung inwards distally. The tendo Achilles is divided obliquely and turned back, the communicating artery is cut between ligatures, and the flexor longus hallucis is cut from the fibula in the lower portion of its attachment and retracted mesially to expose the seat of the fracture. The periosteum of the tibia is incised and the fracture is reduced by hooking up the proximal fragment, while an assistant flexes the foot and presses down upon the distal fragment. Coaption must be perfect. Fixation is maintained by a screw. The wound is closed in layers and the tendo Achilles is lengthened. Movement is begun on the fourth or fifth day and walking in thirty days. Good results were obtained in all twelve cases.

GENERAL MEDICINE

Edited by Wann Langston, M. D.
State University Hospital, Oklahoma City

THE CLINICAL VALUE OF ACIDOPHILUS MILK.—Wm. Earl Clark, M.D., and Mathew White Perry, M.D. N. Y. M. J.—CXVIII, 12—Dec. 19, 1923.

After eighteen months' use of acidophilus milk, the authors report observations on 84 adult cases; each patient having had a quart of the milk a day for six weeks. In all but twenty cases the patients used with the quart of milk 75 grams of lactose daily which enables the change in flora to occur more rapidly.

Fifteen adult patients to be treated for chronic constipation were given the milk for six weeks—thirty of whom were given the milk with 75 grams of lactose a day. The results in general show that acidophilus milk with lactose has a distinctive laxative quality, while the milk alone did not show such an effect. The general tendency was toward a gain in weight.

Patients who seemed to be especially benefitted were those who complained particularly of an excess of intestinal gas, of flatulence and of passage of large amounts of gas by rectum—23 out of 27 patients reported marked improvement.

Five patients between the ages of sixty and seventy years asked for treatment because of intestinal gas and bloating. Relief from the digestive disturbance was marked, milk constipation was relieved and in one case with high indicanuria and marked lethargy, but with a normal blood chemistry, the use of the milk caused a rapid clearing of the lethargy and indicanuria.

In six cases diagnosed as chronic entercolitis, rest in bed and a diet deficient in roughage was also employed. In all cases the patients made a rapid recovery and have remained well at the end of a year. In one case of sprue there was rapid recovery coincident with the use of the milk and lactose and experienced a gain in weight.

Three out of four cases of eczema, which specialists believed to be due to toxic intestinal absorption experienced recovery with the use of the milk and lactose. Four out of eight patients with psychoneurosis, probably due to autointoxication reported improvement.

MODERN METHODS OF TREATING LOBAR PNEUMONIA.—Henry M. Thomas, Jr. M. D., A. J. M. S. CLXVII, 6, December, 1923.

The severe toxemia must be combatted by every form of elimination possible, hence, forcing fluids to three or four thousand cubic centimeters a day allows bowels, kidneys and skin to function best. Should vomiting or delirium interfere with fluid intake, it may be given subcutaneously or by Murphy drip.

No effort must be spared to relieve the heart muscle. Movement must be prevented as much as possible. Levy has shown that the digitalized heart does not dilate as readily during pneumonia as the undigitalized. This would seem to indicate early administration of digitalis, and certainly it should be begun at first signs of myocardial insufficiency. Sudden heart failure may require morphine and atropine, or venesection. Caffein (sodio-benzoate) and camphor (in oil) may be required.

For the effects of toxemia on the peripheral circulation, hydro-therapy is recommended. Epinephrin or pituitrin are sometimes helpful in raising blood pressure and strychnine for its effect on the medullary center. Turpentine stupes, turpentine enemata, and if necessary, pituitrin for tympanitis. ice bag, strapping, and morphia for the pleuritic pain; heroin, gr. one-twelfth for the non-productive cough. If great cyanosis and dyspnea be present, oxygen may help.

Specify Therapy: Type L Serum in the corresponding type of pneumonia. The author believes we have a valuable adjunct in quinine. He recommends quinine muriate 2.0; Urethane 1.0; Aqua dist. q. s. ad 20.0—5 cc intramuscularly—repeat in 24 and 48 hours if necessary.

The author summarizes as follows:

(1) We must never lost sight of the importance of general therapeutic measures.

(2) Of the special measures Type I Antipneumococcus serum is the only one which has given satisfactory results in a large enough series to warrant its further use.

(3) Quinine therapy seems very promising and may subsequently prove to be of great value.

STATE-WIDE CANCER CAMPAIGN—FEBRUARY 15TH TO MARCH 15TH

It is no longer necessary to even suggest to the physician of observation and experience the appalling need of more enlightenment upon the subject of cancer among the laity. We still, though less frequently, see some cases of advanced cancer who have been treated through the early and curable stages of the disease by some M. D. under a diagnosis of an "inflamed wart" or "mole," a "weed in the breast" or "change of life."

The illiterate, arrogant, irregular "doctor," though he may be licensed by our State as qualified to practice medicine, we can hardly expect to reach in our campaign excepting through the

laity. It is possible that some of the laity through our propaganda may become so well versed in the symptoms of cancer as to suggest the diagnosis to him.

Notwithstanding some of our discouragements, you should know that since state-wide cancer education was begun, more than two years ago, reports are coming from many places that more patients are calling upon their physicians at the first manifestations of cancer.

'Tis true that many are being examined who have not the slightest symptom of cancer. Though how much more pleasant it is after examination to be able to send them home with all anxiety relieved than with the saddening sentence **"too late to cure."**

I am pleased to announce that during a thirty-day campaign this year beginning February 15th and ending March 15th, we are to have the full cooperation and organization of the Oklahoma Public Health Association. Their secretary and manager, Mr. R. H. Hixon, Oklahoman Building, Oklahoma City, is already rendering us valuable service and with his County Chairmen will in certain localities handle the entire work. Much of the printed matter which is new has been received and is ready to go out to the Counties which are organized.

The Public Health Association has also promised to finance the purchasing and showing of a special film prepared for Cancer Education. This film, a two reel production, is full of facts and information on cancer which has been woven into a beautiful home love story entitled "Reward of Courage." This film is now in our office ready to go out to various cities and towns where arrangements can be made and the larger number of people reached.

Doctor, education upon the subject of cancer is a sacred duty which falls most heavily upon us who are best qualified to give such information. Let us keep our thoughts and give advice far above a plane of selfishness. Teach our people known facts about cancer. Teach them that in early diagnosis only can a cure be expected. That the treatment of cancer, whether it be by surgery, thermo-cautery, the deep x-ray or radium, is to be selected by the physician according to the particular location or indications in the case. Remembering that whatever the method used, it must be total and complete destruction of all malignant cells.

Fully anticipating your fullest cooperation and help, I am

Everett S. Lain,
Oklahoma City.
State Director
American Society for Control of Cancer

ALCOLO AMONG LEADERS

Since its introduction to the trade, Alcolo, the rubbing alcohol manufactured by John T. Milliken & Company, of Saint Louis, has assumed its place as one of the fastest selling alcohol rubbing lotions in the United States.

The reason for this probably is the fact that the product contains 92 per cent alcohol but has not Benzol or Acetone in it. As an external application it is very effective, being non-injurious to the most delicate skin. Its medication, under special formula, induces an invigorating and tonic effect upon the skin. It is enjoying wide use among hospitals, since it can be diluted 50 per cent and still be an effective lotion. Its very pleasant and mild odor is an appealing feature.

Physicians report excellent results with it and when used as hot-pack, reduces swelling in cases of blood poisoning, etc.

It is packaged in 4-ounce and 16-ounce bottles.

AMERICAN ARSPHENAMINES NOW THE WORLD'S STANDARD

A few years ago there was not a gram of arsphenamine made in this country, not a gram. We were abjectly dependent on other countries for our supply of this very important drug.

Now, thanks to the Dermatological Research Laboratories, of Philadelphia, we are in a different and more complacent position. Not only is arsphenamine now being made in America in quantity sufficient for all needs, present and future, but the quality is such as the world has never before known. As the result of researches and refinements in the manufacture of the drug, we now have an arsphenamine of greatly enhanced effectiveness, along with a greater margin of safety for the patient, than any of the imported drugs afforded.

As for neoarsphenamine, the first supplies of which also came from Europe, the circumstances are much the same. A very superior quality of drug, in fact the best drug known to syphilologists, now comes from the Dermatological Research Laboratories, branch of The Abbott Laboratories, Chicago. It has been endowed by chemists with a trypanocidal activity almost if not quite that of arsphenamine, whereas originally the activity of related arsenical was considerably less.

TAKE IT EASY

Take it easy,
Don't get het;
End o' the road
's longways yet.

It's a right stiff pull
In a durn tight place,
With scurce no
Let up on the trace.

We're hitched up some
To trouble an' care,
An' it's bad made wuss
When we fuss and flare.

Stiddy and slow's
Sartain an' safe,
A lot sight better'n
To fret an' chafe.

Keep to the road
Thru mud and dust;
Dont get het,
Ner don't lose trust.

The end o' the road
Mayn't be in sight;
But take it easy,
The world's all right.

—Victor E. Southworth.

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Meeting Place, Oklahoma City, May 13, 14, 15, 1924.

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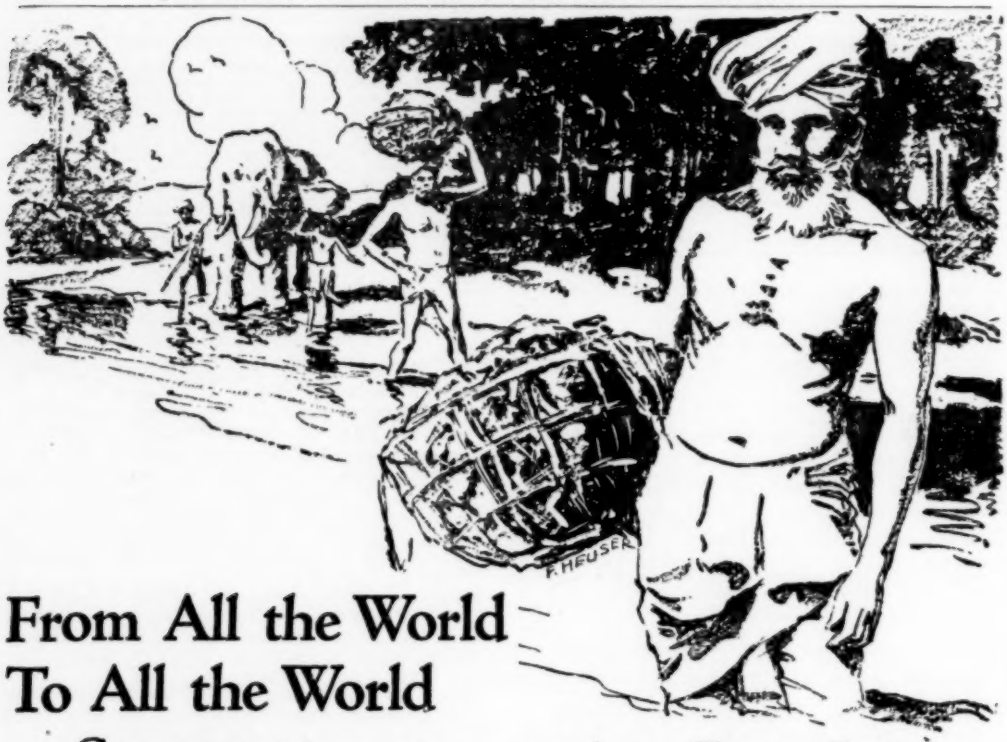

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